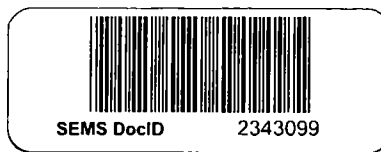


8712-18-25

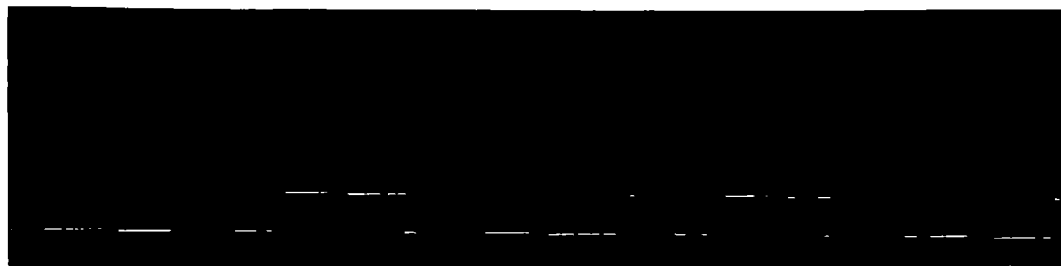
orig.



A Halliburton Company



ORIGINAL
(Red)



FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION



999 WEST VALLEY ROAD
WAYNE, PENNSYLVANIA 19087
215-687-9510

ORIGINAL
(Red)

April 21, 1988
R-585-12-7-20
68-01-7346

Mr. Ben Mykijewycz
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Subject: Final Report
TDD No. F3-8712-18
EPA No. PA-0463
Arco Petroleum Products Company
Southwest Philadelphia, Pennsylvania

Dear Mr. Mykijewycz:

Submitted herewith is a final Preliminary Assessment Using Available Information report for the subject site. The report is based on information obtained from RCRA files.

- The site visit has been scheduled for Thursday, December 17, 1987. Data gathered during the site visit will be incorporated into the final report. At that time, recommendations will be made.

The Arco Petroleum Products Company site is located on Passyunk Avenue, southwest Philadelphia, Pennsylvania (see figure 1, attachment 1). It is bordered to the west by the Schuylkill River and to the east by the Schuylkill Expressway. The site is located approximately 1-1/2 miles west of Veterans Stadium and approximately one mile northwest of the United States Naval Yard.

The Arco Petroleum Products Company, Philadelphia Refinery, is an integrated fuel refinery with a crude oil processing capacity of 125,000 barrels per day. The company began operation in the 1860s as an oil distribution terminal. In 1900, batch processing of crude oil began on site. Initially, kerosene production was the company's major interest, with gasoline a by-product. However, during World War II, full-scale production of gasoline was instituted.

Crude oil is brought into the refinery by pipeline and is stored in on-site storage tanks. The crude oil is then sent to two distillation units where separation into its various fractions occurs. The major fractions recovered from the distillation process include light hydrocarbon gases, reformer stock, kerosene, furnace oil, gas oils, and asphalts. These are then further utilized to produce various other petroleum products such as unleaded regular, unleaded supreme, and leaded regular gasoline.

In August 1986, A.T. Kearney, Incorporated, of Alexandria, Virginia, performed a RCRA facility assessment of the subject site. At that time, several solid waste management units (SWMUs) were identified in the north, south, and west yards of the plant (see attachment 1, figures 2, 3, and 4, and attachments 3, 4, and 5). Some of the waste materials that have been handled by these units include air flotation float, slop oil emulsion solids, heat exchange bundle cleaning sludge, API separator sludge, and leaded tank bottom wastes (petroleum wastes K048 through K051), as well as cooling tower waste, spent acids, and rags and gloves contaminated with tetraethyl lead. Several of these SWMUs, including a leaded storage tank bottom waste disposal area (SWMU no. 3) in the north yard, disposal area nos. 3 and 4 (SWMU nos. 5 and 6), leaded storage tank bottom disposal area no. 5 (SWMU no. 7) in the south yard, and disposal area nos. 1 through 4 (SWMU nos. 8, 9, and 10) in the west yard, are no longer in operation.

SWMU no. 3 is a 150- by 40-foot area that was used for temporary disposal of leaded tank bottom waste prior to application at the land treatment facility located in the north yard. It was in operation from the 1950s until 1980. This land disposal area is reported to have a concrete base. Disposed material has since been removed from this area.

SWMU nos. 5 and 6 were both used for land disposal of cooling tower and the refinery waste. Disposal area no. 3 is approximately 50 by 275 feet in size; disposal area no. 4 is approximately 100 by 275 feet in size. It is not known when they were put into operation; however, disposal area no. 3 was closed in the mid-1960s. The date of closure of area no. 4 is not known. No liners other than naturally occurring soils were employed at these units. A soil cover has since been placed over both disposal areas.

SWMU no. 7 is an area approximately 100 by 50 feet in size once used for land disposal of leaded gasoline tank bottom waste (K052). It is not known when disposal activities were initiated in this area; however, the unit was closed in the mid-1960s. The unit was constructed of naturally occurring soils and fill material. Upon closure, a soil cover was placed over all waste material.

SWMU no. 8 is an area approximately 200 by 530 feet in size previously used for land disposal of unknown waste from petroleum-refining-related activities. The date of start-up and closure is unknown. Upon closure, the area was sealed with a clay cap and compacted to achieve 10^{-7} cm/sec permeability. Lines were never used.

Currently, the Atlantic Refining and Marketing Company is applying for a RCRA Part I and II Permit to operate a hazardous waste management facility at the Philadelphia Refinery. As a result, a RCRA facility assessment was performed at the site. Recommendations outlined in the written report can be found in attachment 6. In order for such a permit to be granted, specific corrective actions outlined by RCRA must be met at the facility (see attachment 7).

If you have any further questions, please contact me.

Respectfully submitted,

Reviewed by,

Approved by,

Not responsive due to revised scope

Chemist

Assistant Manager

Regional Operations
Manager, FIT 3

Not responsive based on revised scope

Attachments

ORIGINAL
(Red)

ATTACHMENT 1

SOURCE: (7.5 MINUTE SERIES) U.S.G.S. PHILADELPHIA, PA. QUAD

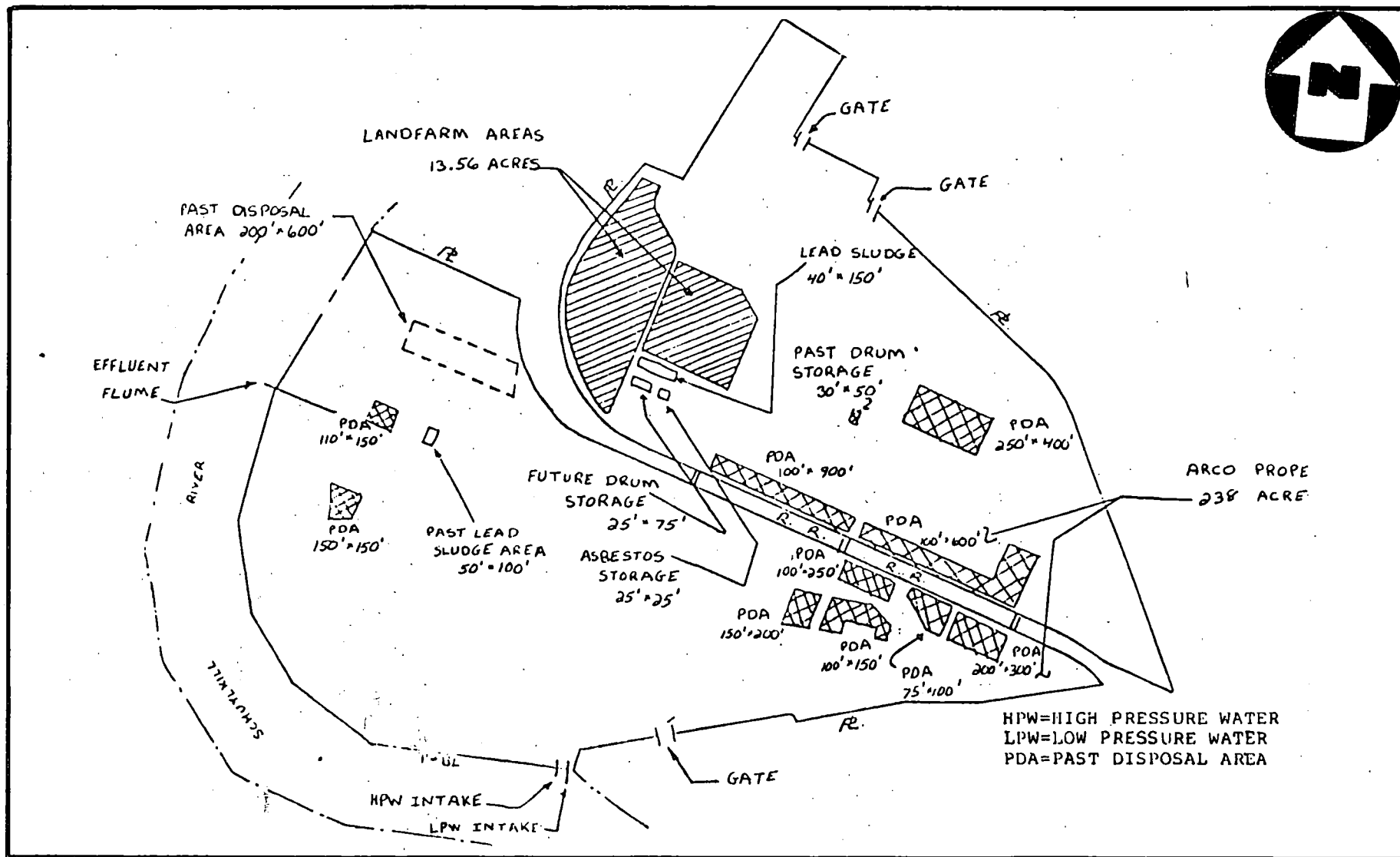
SITE LOCATION MAP

ARCO PETROLEUM PRODUCTS CO., PHILA., PA.

SCALE 1:24000

FIGURE 1

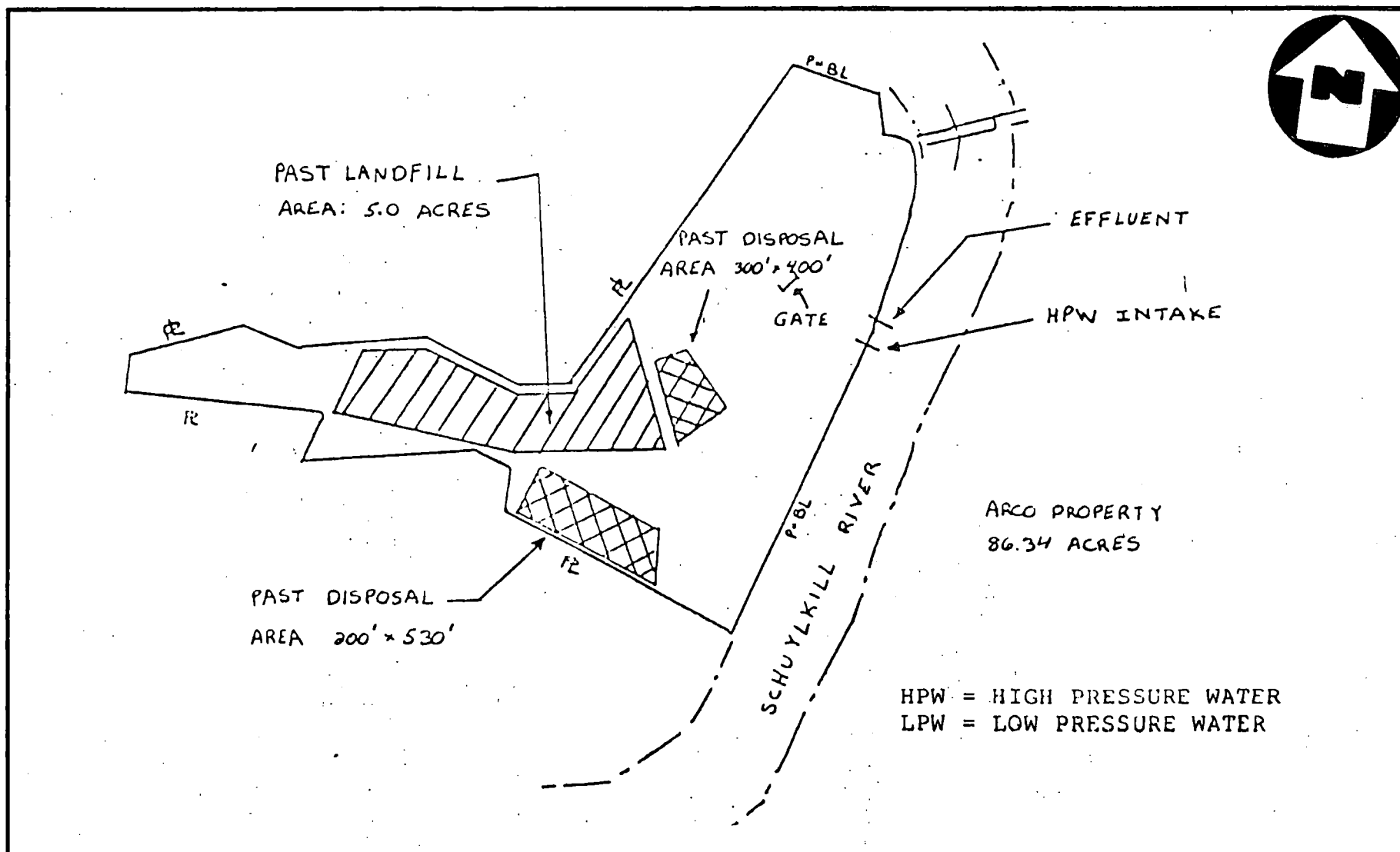




SOURCE: RCRA FACILITY ASSESSMENT ATLANTIC REFINING & MARKETING CO. PREPARED BY: A.T. KEARNEY INC
AVAILABLE IN: EPA RCRA FILES.

NORTH YARD PLAN/AREA "A"
ARCO PETROLEUM PRODUCTS CO., PHILA., PA.
(NO SCALE)

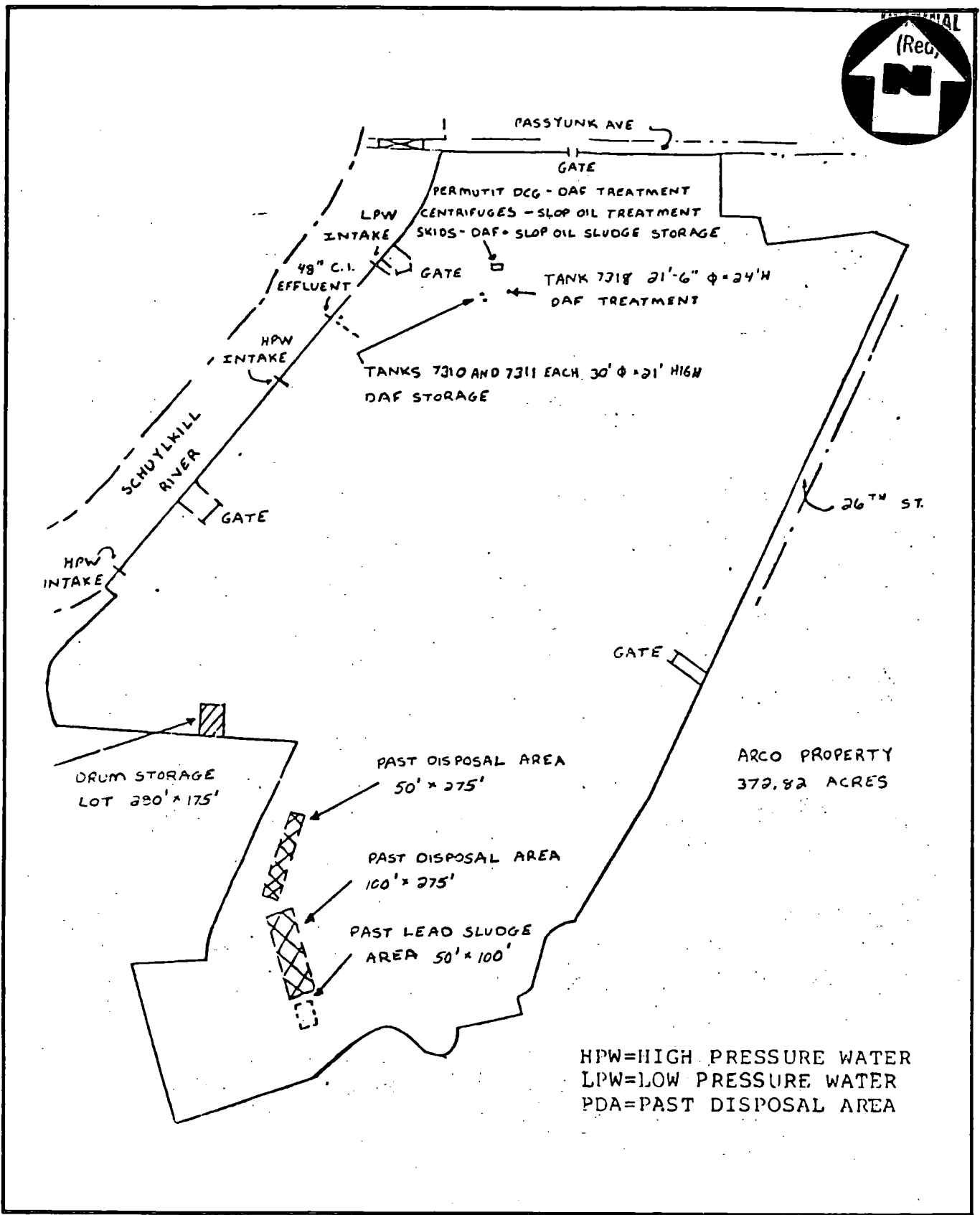
FIGURE 2



SOURCE: RCRA FACILITY ASSESSMENT ATLANTIC REFINING & MARKETING CO. PREPARED BY: A.T. KEARNEY INC.
 AVAILABLE IN: EPA RCRA FILES

WEST YARD PLAN/AREA "B"
ARCO PETROLEUM PRODUCTS CO., PHILA., PA.
 (NO SCALE)

FIGURE 3



SOURCE: RCRA FACILITY ASSESSMENT ATLANTIC REFINING & MARKETING CO. PREPARED BY: A.T. KEARNEY INC.
 AVAILABLE IN: EPA RCRA FILES

SOUTH YARD PLAN/AREA "C"

ARCO PETROLEUM PRODUCTS CO., PHILA., PA.

(NO SCALE)

FIGURE 4



ORIGINAL
(Red)

ATTACHMENT 2

ORIGINAL
(Red)

F3-8712-18

**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT****I. IDENTIFICATION**01 STATE 02 SITE NUMBER
PA 0463**II. SITE NAME AND LOCATION**

01 SITE NAME (Legal, common, or descriptive name of site)

Arco Petroleum Products Company

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER

3144 Passyunk Avenue

03 CITY

Philadelphia

04 STATE

PA

05 ZIP CODE

19145

06 COUNTY

Philadelphia

07 COUNTY

101

08 CONG

01

09 COORDINATES LATITUDE

N 39° 55' 00" --

LONGITUDE

W 75° 12' 00" --

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (if known)

Atlantic Refining and Marketing Corporation

02 STREET (Business, mailing, residential)

3144 Passyunk Avenue

03 CITY

Philadelphia

04 STATE

PA

05 ZIP CODE

19145

06 TELEPHONE NUMBER

(215) 339-2215

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL:

(Agency name)

☐ C. STATE☐ D. COUNTY☐ E. MUNICIPAL☐ F. OTHER:

(Specify)

☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3001 DATE RECEIVED: MONTH DAY YEAR☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: MONTH DAY YEAR☐ C. NONE**IV. CHARACTERIZATION OF POTENTIAL HAZARD**

01 ON SITE INSPECTION

☐ YES

DATE

MONTH DAY YEAR

☒ NO

BY (Check all that apply)

☐ A. EPA☐ B. EPA CONTRACTOR☐ C. STATE☐ D. OTHER CONTRACTOR☐ E. LOCAL HEALTH OFFICIAL☐ F. OTHER:

(Specify)

CONTRACTOR NAME(S):

02 SITE STATUS (Check one)

☒ A. ACTIVE☐ B. INACTIVE☐ C. UNKNOWN

03 YEARS OF OPERATION

1860s

present

☐ UNKNOWN

BEGINNING YEAR

ENDING YEAR

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Waste materials include air flotation float, slop oil emulsion solids, heat exchanger bundle cleaning sludge, API separator sludge, leaded tank bottom waste, cooling tower wastes, spent acids, rags, and gloves contaminated with tetraethyl lead and other refining wastes.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The potential for groundwater contamination exists due to the presence of unlined land disposal areas on site. Surface water runoff may result in release of contaminants to the nearby Schuylkill River.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH

(Inspection required promptly)

☐ B. MEDIUM

(Inspection required)

☐ C. LOW

(Inspect on time available basis)

☐ D. NONE

(No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT

Gil Horowitz

02 OF (Agency/Organization)

EPA RCRA

03 TELEPHONE NUMBER

(215) 597-9800

04 PERSON RESPONSIBLE FOR ASSESSMENT

Not responsive due to revised scope

05 AGENCY

NUS

06 ORGANIZATION

FIT 3

07 TELEPHONE NUMBER

Not responsive based on revised scope

08 DATE

12 10 87

MONTH DAY YEAR



I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	0463

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) <input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> E. SLURRY <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> F. LIQUID <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> G. GAS <input type="checkbox"/> D. OTHER _____ <i>(Specify)</i>	02 WASTE QUANTITY AT SITE <i>(Measures of waste quantities must be independent)</i> TONS <u>UNKNOWN</u> CUBIC YARDS _____ NO. OF DRUMS _____	03 WASTE CHARACTERISTICS (Check all that apply) <table border="0"> <tr> <td><input checked="" type="checkbox"/> A. TOXIC</td> <td><input type="checkbox"/> E. SOLUBLE</td> <td><input checked="" type="checkbox"/> I. HIGHLY VOLATILE</td> </tr> <tr> <td><input type="checkbox"/> B. CORROSIVE</td> <td><input type="checkbox"/> F. INFECTIOUS</td> <td><input type="checkbox"/> J. EXPLOSIVE</td> </tr> <tr> <td><input type="checkbox"/> C. RADIOACTIVE</td> <td><input checked="" type="checkbox"/> G. FLAMMABLE</td> <td><input type="checkbox"/> K. REACTIVE</td> </tr> <tr> <td><input type="checkbox"/> D. PERSISTENT</td> <td><input checked="" type="checkbox"/> H. IGNITABLE</td> <td><input type="checkbox"/> L. INCOMPATIBLE</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> M. NOT APPLICABLE</td> </tr> </table>	<input checked="" type="checkbox"/> A. TOXIC	<input type="checkbox"/> E. SOLUBLE	<input checked="" type="checkbox"/> I. HIGHLY VOLATILE	<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE	<input type="checkbox"/> C. RADIOACTIVE	<input checked="" type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE	<input type="checkbox"/> D. PERSISTENT	<input checked="" type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE			<input type="checkbox"/> M. NOT APPLICABLE
<input checked="" type="checkbox"/> A. TOXIC	<input type="checkbox"/> E. SOLUBLE	<input checked="" type="checkbox"/> I. HIGHLY VOLATILE															
<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE															
<input type="checkbox"/> C. RADIOACTIVE	<input checked="" type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE															
<input type="checkbox"/> D. PERSISTENT	<input checked="" type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE															
		<input type="checkbox"/> M. NOT APPLICABLE															

III. WASTE TYPE

III. WASTE TYPE				
CATEGORY	SUBSTANCE NAME	Q1 GROSS AMOUNT	Q2 UNIT OF MEASURE	Q3 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			Petroleum wastes K048 through K051.
SOL	SOLVENTS			Other waste from petroleum refining related activities.
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			Leaded petroleum waste products.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

RCRA facility assessment, Atlantic Refining and Marketing Company, prepared by A.T. Kearney, Incorporated
Alexandria, Virginia.
(Available in RCRA file)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

ORIGINAL

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 0463

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Liners are not in place in many of the past disposal areas. Contaminants may migrate through the soil and enter into groundwater.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Some of the old land disposal areas are not clay capped or have not been revegetated to reduce soil erosion. Therefore, there is the possibility of surface water runoff entering the Schuylkill River.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Site is located in a highly industrialized area. Petroleum products are generated and stored on site. There is the potential for gaseous releases to the atmosphere.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Buried waste material may lead to buildings of subsurface gases.

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None has been reported. The refinery is fenced off and is located in a highly industrialized area.

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION
Land disposal of waste took place in naturally occurring soils.

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None reported or observed. Surrounding area on municipal water supply.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None has been reported.

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None has been reported.

ORIGINAL
(Red)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 0463

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include names of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills, runoff, standing liquids, leaking drums)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

None has been reported. All wastes material is reported to be covered.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None has been reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

The Atlantic Refinery and Marketing Company is presently in the process of applying for a RCRA permit to operate a hazardous waste management facility at the site.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

ORIGINAL
(Red)

ATTACHMENT 3

5.0 UNIT CONDITIONS, CONCLUSIONS, AND RECOMMENDATIONS

I. NORTH YARD

1. Unit Name: Land Treatment Facility (Ref. 1, 6, 7)

Description: The unit covers an irregular 13.5 acres within the North Yard (see Photos 1 through 4). Also referred to as the Landfarm, it is divided into 8 different areas, each separated by an access ramp, topography is relatively flat (approximately 1.0% slope to facilitate drainage). The Landfarm converts hazardous waste to nonhazardous waste via biological degradation and metal stabilization. The maximum amount of inventory ever on site is approximately 22,000 cu. yds. (assumed 1 ft. depth). Equipment presently used at the Landfarm includes dozers to disc the soil and a vacuum truck designed to spread sludges throughout the Landfarm areas.

Date of Start-Up: 1979

Date of Closure: June 1, 2003

Wastes Managed: Listed Petroleum Wastes K048 through K052 are land applied for biological breakdown. These wastes are as follows: dissolved air flotation float, slop oil emulsion solids, heat exchanger bundle cleaning sludge, API separator sludge, and leaded tank bottoms. (See Landfarm Application Data, Attachment 2.)

Release Controls: The unit is surrounded by a three-foot clay berm covered by mill slag. The unit has a one- to four-foot clay base that is sloped 1% to the west where water is collected and pumped to the Wastewater Treatment Plant. Soil types at the unit are as follows:

0'-3' clay

3'-8' fill
8'-13' organic silt
13'-18' coarse brown and gray sand and gravel
18'-38' brown clay sand
38'-48' red clay sand

Core samples are taken each month as required by an EPA permit and quarterly as required by the PA DER regulations.

The 1% slope of the land treatment surface is designed to minimize surface erosion and enhance solids settling. In addition, the gate at the bottom of the collection box is normally kept closed to prevent the unintentional release of water to the sewer system. The entire Land Treatment Facility area is less than 15 acres. Based on the 25-year, 24-hour storm (5.2 inches), the volume of rainfall is 2.1 million gallons. The Wastewater Treatment Plant capacity is 9.0 million gallons/day. Typical current treatment volumes are less than 4.0 million gallons/day verifying our ability to treat the additional stormwater.

Figure 3 shows a side profile of the Land Treatment Facility drainage system. The average berm height above the treatment zone is 1'-14-1/2". Discharge to the Wastewater Treatment Plant is controlled by the gate at the bottom of the drainage box.

Atlantic Refining and Marketing Co. has not experienced any problems of wind dispersal of wastes at either the waste pile or Land Treatment Facility. This experience is expected based on the following facts: The treatment zone at both facilities is clay although the solids applied to the waste pile is primarily iron oxide (rust/scale). The bulk density of these materials are 35-163#/foot³ for clay and 355.7#/foot³ for iron oxide based on Tables 7-4 and 3-1 in Perry's "Chemical Engineers' Handbook," fifth edition. The average wind

knots (9.9 MPH [Nautical]) with a maximum velocity of 33 knots (38 MPH (Nautical)) based on wind velocity data from the Philadelphia International Airport 1965-1974. Per Table 7-13 in Perry's, the minimal air velocity required to move the lightest solid (35#/foot³ clay) is 5500 feet/min. The maximum velocity above 38 mph (Nautical) is equivalent to 3850.67 feet/min. Therefore, for wind to disperse the lightest material in the waste pile or Land Treatment Facility, its velocity would have to be almost 50% greater than the maximum recorded velocity in our area.

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(Red)

History of Releases: Atlantic Refining and Marketing Co. declares that no releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low to moderate. The greatest potential of a release to the air is during the spreading of the waste on the Landfarm. However, Atlantic Refining and Marketing Co. states that they have not had any problems with wind dispersal in the past.

Groundwater: The potential for a release to the groundwater is moderate. The possibility of migration through the unsaturated zone does exist.

Surface Water: The potential for release to surface waters is low. The construction of the unit is adequate to prevent the occurrence of runoff and run-on.

Subsurface Gas: There is no potential for a buildup of subsurface gas. All wastes are treated aboveground.

Recommendations: The groundwater monitoring program should be upgraded. More monitoring wells should be installed to

adequately detect possible plume migrations, and additional test parameters should be performed. These additional parameters should include phenols, naphthalene, lead, and chromium.

ORIGINAL
(Red)

Arco Petroleum Products Company
Philadelphia Refinery
Land Treatment Facility Drainage System

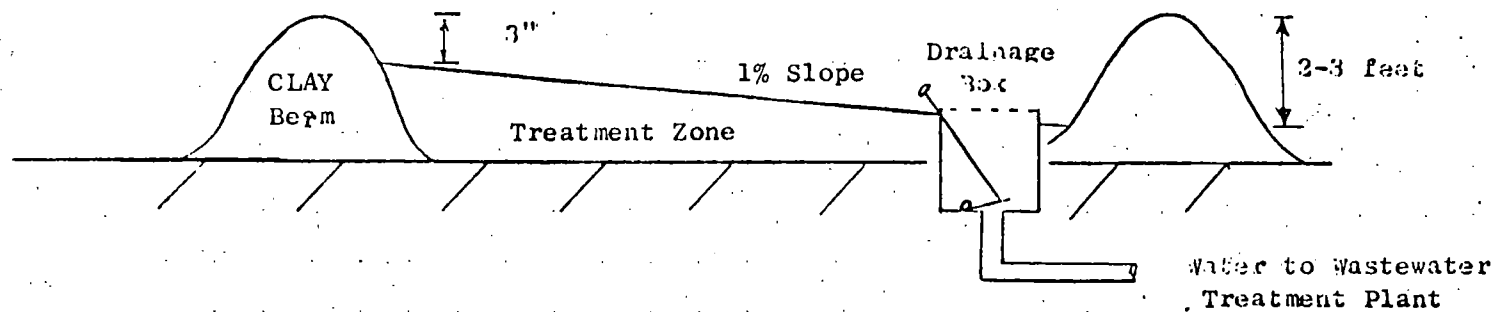


FIGURE 6

ORIGINAL
(Red)

2. Unit Name: Leaded Storage Tank Bottoms Waste Pile (Ref. 1, 6, 7)

Description: The unit is a waste pile on a concrete base with 12" of clay, with dimensions of 140 feet by 47 feet (see Photos 5 and 6 and file Photo 7). This unit contains a maximum of 150 cubic yards of leaded sludge. The waste pile sits on the concrete pad with berms surrounding it. Three drain pipes in berm recirculates runoff, etc., to Wastewater Treatment Plant. The remaining waste which has been weathered goes to the land treatment unit via front-end loader.

Date of Start-Up: 1980

Date of Closure: June 1, 1999

Wastes Managed: The unit manages wastes generated during cleaning of leaded gasoline tanks. Sludge is weathered here before being transferred to the Land Treatment Facility. The unit handles approximately 100 tons of waste per year.

Release Controls: Three-foot-high berms surround the unit. The clay is sloped to the west where there are valved drainage pipes. Water is drained back to the Wastewater Treatment Plant. The two-foot by three-foot berm is made with a coating of mill slag which becomes rock hard after being wet and dried. The prevents berm erosion and is for runoff/run-on control. The 24-hour, 25-year storm for the Philadelphia area is 5.2 inches (U.S. Department of Commerce, Weather Bureau Technical Paper No. 25). The average berm height above the waste pile treatment zone is 7.5 inches thus providing enough storage to hold the rainwater. A valve on the drainage line provides control of the discharge of the water to the sewer. Drainage commences immediately after a storm. The maximum volume of water collected will be 21,328

gallons (based on the 140 foot by 47 foot surface area of the waste pile. The Wastewater Treatment Plant capacity is over 7,000,000 gallons per day. ORIGINAL (Red)

History of Releases: Atlantic Refining and Marketing Co. declares no known release of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low to moderate because the waste pile is uncovered. However, Atlantic Refining and Marketing Co. states that no air releases have been experienced in the past.

Groundwater: The potential for a release to the groundwater is moderate. Possible migration of the waste may occur through the base of the unit.

Surface Water: The potential for a release to the surface waters is low. The construction of the unit includes berms that control run-on and runoff and is not subject to erosion.

Subsurface Gas: There is no potential for a buildup of subsurface gas. All wastes are stored and treated aboveground.

Recommendations: When upgrading the groundwater monitoring program of the Landfarm, it should be done so that monitoring of this unit will be incorporated with the new wells.

ARCO PETROLEUM PRODUCTS COMPANY'S
PHILADELPHIA REFINERY
WASTE PILE DRAINAGE SYSTEM

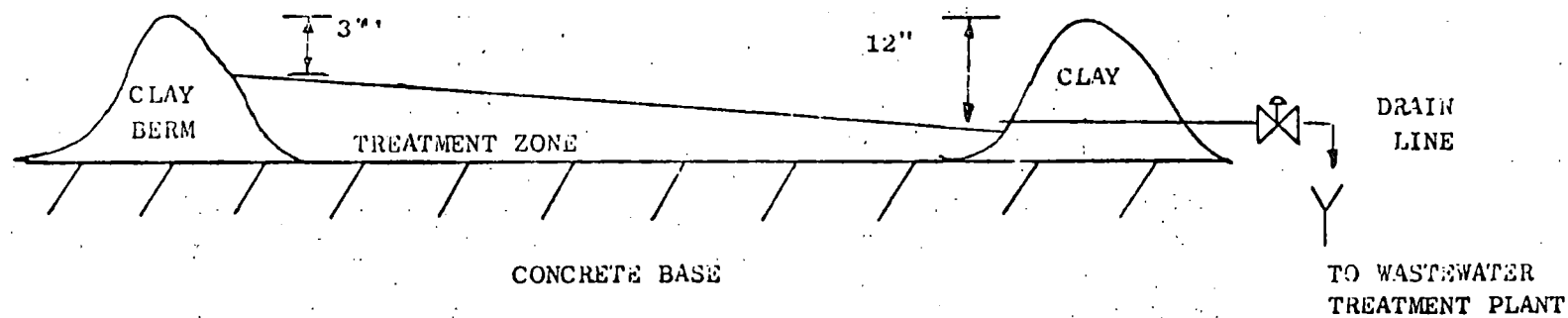


FIGURE 7

ORIGINAL
(Red)

ORIGINAL
(Red)

3. Unit Name: Past Leaded Storage Tank Bottoms Disposal Area
(Ref. 1, 6, 7)

Description: This unit is 150 feet in length by 40 feet in width and is located in the southwest section of the yard.

Date of Start-Up: 1950's

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit was closed in 1980. The area was larger than needed, therefore it was closed and moved to the waste pile. The area was cleaned and swept clean of residues.

Wastes Managed: This unit managed leaded storage tank bottoms. Atlantic Refining and Marketing Co. states that the disposed material was removed and deposited in SNU #2.

Release Controls: This unit is reported to have a concrete base, however no berms were installed.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: There is no potential for a release to the air. All wastes have been removed from the unit when it was closed.

Groundwater: There is no potential for a release to the groundwater because the unit is closed and all wastes were removed. However, the unit may have been the subject of releases during its usage which could cause the area to be contaminated.

Surface Water: The potential for releases to the surface water is low. If releases from the unit occurred during its operation in the past, the possible effect on surface waters could be assessed by the extent of groundwater contamination.

Subsurface Gas: There is no potential for a buildup of subsurface gas. All wastes were removed at closure of the unit and the unit was aboveground during its operation.

Recommendations: Exact location of the unit was not obtained during this project's site visit. The exact location of the unit should be investigated and soil samples should be taken to determine if releases have occurred and if remedial action is necessary.

ORIGINAL
(Red)

ATTACHMENT 4

II. SOUTH YARD

ORIGINAL
(Red)

4. Unit Name: Drum Storage Area (Ref. 1, 6, 7)

Description: This unit is a subsection of a drum storage area and is RCRA regulated (see Photo 7 and file Photo 8). The total storage area measures 49,000 square feet and the hazardous waste portion measures 100 square feet. This unit is a macadam based unit surrounded by a 6-inch high concrete berm. The entire area is sloped to the southeast corner, to a valved drainage pipe.

Date of Start-Up: 1980

Date of Closure: June 1, 1999

Wastes Managed: Rags and gloves contaminated with tetraethyl lead.

Release Controls: A six-inch concrete berm is used to control run-on/runoff.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. Containers stored in this area are covered.

Groundwater: The potential for a groundwater release is low to moderate. Wastes from leaking containers could migrate through cracks in the macadam base.

Surface Water: The potential for a release to the surface waters is low to moderate. Controls may not be adequate to control run-on/runoff and large spills. ORIGINAL (Red)

Subsurface Gas: There is no potential for a buildup of subsurface gas. All wastes are stored aboveground.

Recommendations: The present construction of the unit does not meet RCRA standards. The unit should be constructed to meet RCRA requirements for container storage areas.

5. Unit Name: Past Disposal Area #3 (Ref. 1, 6, 7)

ORIGINAL
(Red)

Description: This unit was a land disposal area that covered an irregular 50 feet by 275 feet plot (see Photos 8 and 9).

Date of Start-Up: Date of start-up is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit was closed in the mid-1960's.

Wastes Managed: It is believed the unit managed cooling tower wastes and other refining wastes, however exact nature and quantities are unknown.

Release Controls: The unit was constructed of naturally occurring soils and fill material.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible erosion may cause the waste constituents to be subjected to run-on or runoff.

Subsurface Gas: The potential for subsurface gas generation is low to moderate. Gases may build up since the unit had a cover applied to it during closure. ORIGINAL (See)

Recommendations: Tests should be performed on the sediments and pond water in the Guard Basin which would detect possible migration of waste constituents from this unit.

6. Unit Name: Past Disposal Area #4 (Ref. 1, 6, 7)

ORIGINAL
(Red)

Description: This unit was a land disposal area that covered an irregular 100 foot by 275 foot plot (see Photos 8 and 9).

Date of Start-Up: The date of start-up is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit is closed, but no date of closure was given.

Wastes Managed: The unit managed cooling tower wastes and other unknown refining wastes.

Release Controls: Release controls were not known.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible erosion may cause the waste constituents to be subjected to run-on or runoff.

Subsurface Gas: The potential for subsurface gas generation is low to moderate. Gases may build up since the unit had a cover applied to it during closure. ORIGINAL (red)

Recommendations: Tests should be performed on the sediments and pond water in the Guard Basin which would detect possible migration of waste constituents from this unit.

7. Unit Name: Past Leaded Storage Tank Bottoms Disposal Area #5
(Ref. 7)

ORIGINAL
(Red)

Description: This unit was a land disposal unit. The dimensions of the unit were 100 feet by 50 feet within an irregular plot (see Photo 10).

Date of Start-Up: Exact start-up date is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that this unit was closed in the mid-1960's.

Wastes Managed: The unit managed leaded gasoline storage tank bottoms (K052).

Release Controls: The unit was constructed from naturally occurring soils and fill material.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible

erosion may cause the waste constituents to be subjected to
run-on or runoff.

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(Red)

Subsurface Gas: The potential for subsurface gas generation
is low based on the nature of the wastes.

Recommendations: Tests should be performed on the sediments
in the Guard Basin which and pond water would detect possible
migration of waste constituents from this unit.

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ATTACHMENT 5

III. WEST YARD

8. Unit Name: Past Disposal Area #1 (Ref. 6, 7)

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(Ref)

Description: The unit was a land disposal area. The size of the unit is 200 feet by 530 feet, of irregular shape (see Photos 11 and 12).

Date of Start-Up: Date of start-up is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit is closed, but no date of closure was provided.

Wastes Managed: The unit managed unknown wastes from petroleum refining related activities.

Release Controls: The area is clay capped and compacted to achieve 10^{-7} cm/sec permeability.

History of Releases: Atlantic Refining and Marketing Co. declares no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible erosion may cause the waste constituents to be subjected to run-on or runoff.

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(Red)

Subsurface Gas: The potential for subsurface gas generation is low to moderate. Gases may build up since the unit had a cover applied to it during closure.

Recommendations: A groundwater monitoring program should be developed to determine if releases are occurring from the unit. Also, the cover should have an upgraded system, such as vegetation, to prevent erosion and subsequent runoff contamination.

9. Unit Name: Past Disposal Area #2 (Ref. 6, 7)

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Description: This unit was a land disposal area with dimensions of 300 feet by 400 feet within an irregular plot (see Photos 13 and 14).

Date of Start-Up: Date of start-up is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit is closed, but no closure date was provided.

Wastes Managed: The unit managed spent acids and caustic wastes along with other unknown refining wastes. The unit also handled waste asphalt and coal slag.

Release Controls: The unit was constructed from naturally occurring soils and is clay capped and compacted to achieve a 10^{-7} cm/sec permeability.

History of Releases: Atlantic Refining and Marketing Co. declares that no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible erosion may cause the waste constituents to be subjected to run-on or runoff.

Subsurface Gas: The potential for subsurface gas generation is low to moderate. Gases may build up since the unit had a cover applied to it during closure.

Recommendations: A groundwater monitoring program should be developed to determine if any releases are occurring from the unit. Also the cover should have an upgraded system such as vegetation to prevent erosion and subsequent runoff contamination.

10. Unit Name: Past Disposal Areas #3 and #4 (Ref. 6, 7)

Description: The unit was a land disposal area. The (Page) of the unit is 1,600 feet by 400 feet, of irregular shape (see Photos 15, 16, and 17).

Date of Start-Up: Date of start-up is unknown.

Date of Closure: Atlantic Refining and Marketing Co. declares that the unit was closed in the mid-1960's.

Wastes Managed: The unit managed unknown wastes from petroleum refining related activities.

Release Controls: Release controls were unknown.

History of Releases: Atlantic Refining and Marketing Co. declares no known releases of hazardous waste or constituents have occurred to date.

Conclusions Regarding Potential for Releases

Air: The potential for a release to the air is low. The unit has been closed since the mid-1960's.

Groundwater: The potential for a groundwater release is moderate. No liners other than natural occurring soils were employed at the unit. Upon closure of the unit, a soil cover was placed over the waste leaving the possibility of migration into the groundwater by the constituents of the waste.

Surface Water: The potential for a surface water release is low to moderate. Although the unit is covered, possible erosion may cause the waste constituents to be subjected to run-on or runoff.

Subsurface Gas: The potential for subsurface gas generation is low to moderate. Gases may build up since the unit had cover applied to it during closure. ORIGINAL (Red)

Recommendations: A groundwater monitoring program should be developed to determine if any releases are occurring from the unit.

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(Red)

ATTACHMENT 6

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(Red)

6.0 SUMMARY OF RECOMMENDATIONS

<u>SWMU</u>	<u>Recommendation</u>
<u>North Yard</u>	
Land Treatment Facility	<ul style="list-style-type: none">o Upgrade groundwater monitoring
Leaded Storage Tank Bottoms Waste Pile	<ul style="list-style-type: none">o Upgrade groundwater monitoring
Past Leaded Storage Tank Bottoms Disposal Area	<ul style="list-style-type: none">o Determine exact locationo Take soil samples
<u>South Yard</u>	
Drum Storage Area	<ul style="list-style-type: none">o Construct to meet RCRA requirements
Past Disposal Area #3	<ul style="list-style-type: none">o See Guard Basin
Past Disposal Area #4	<ul style="list-style-type: none">o See Guard Basin
Past Leaded Storage Tank Bottoms Disposal Area #5	<ul style="list-style-type: none">o See Guard Basin
<u>West Yard</u>	
Past Disposal Area #1	<ul style="list-style-type: none">o Develop a groundwater monitoring programo Upgrade the cover
Past Disposal Area #2	<ul style="list-style-type: none">o Develop a groundwater monitoring programo Upgrade the cover
Past Disposal Area #3 and #4	<ul style="list-style-type: none">o Develop a groundwater monitoring program

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ATTACHMENT 7

PART II - SPECIFIC CONDITIONS

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A. CORRECTIVE ACTION

Section 3004(u) of RCRA (40 CFR §264.101) requires corrective action for all releases of hazardous waste or hazardous constituents from any solid waste management unit, at a treatment, storage, or disposal unit, regardless of when wastes were placed in the unit, for all permits issued after November 8, 1984.

For Atlantic Refining and Marketing Company, Philadelphia Refinery, preliminary assessment information was developed through information provided in the facility's RCRA Part B Permit Application, the SWMU Response Letter, from information obtained from EPA and PA DER files, and through information obtained during the site investigation conducted August 6, 1986.

The permit requires Atlantic Refining and Marketing Company to 1) develop and implement a supplemental groundwater monitoring program for the Land Treatment Facility and the Leaded Storage Tank Bottoms Waste Pile, 2) sample soils around the Past Leaded Storage Tank Bottoms Disposal Area, 3) perform the necessary actions to bring the existing hazardous waste storage facility into compliance, 4) develop and implement a groundwater monitoring plan for the West Yard Disposal Areas, 5) upgrade the cover on West Yard Disposal Areas 1 and 2, and 6) develop and implement a water and sediment analysis program for the Guard Basin.

1. Within 90 calendar days after the effective date of this permit, the Permittee shall submit to EPA a supplemental groundwater monitoring plan for the Land Treatment Facility and Leaded Storage Tank Bottoms Waste Pile Areas.

a. Objectives of the plan:

- (1) To establish the presence of hazardous constituents in the uppermost aquifer that may be resulting from the Land Treatment Facility and the Leaded Storage Tank Bottoms Waste Pile Area.

b. Requirements of the plan:

- (1) The downgradient wells must be capable of immediately detecting any statistically significant amounts of hazardous constituents that migrate from the unit to the groundwater.
- (2) The monitoring system must be designed to operate for a period of no less than 30 years.

c. Elements to be included in the aquifer monitoring plan:

- (1) A description and map of proposed well locations, including a survey of each well's surface reference point and the elevation of the casing top.
- (2) Size and depth of wells.
- (3) Description of well intake design, including screen slot size and length, filter pack materials and method of filter-pack emplacement.
- (4) Type of proposed well casing and screen materials; (The choice of well materials should be made in light of the parameters to be monitored and for the nature of the hazardous constituents that could potentially migrate from the facility. The well materials should: (a) minimize the potential of absorption and desorption of constituents from the samples and (b) maintain their integrity from the expected life of the system (at least 30 years).
- (5) Methods used to seal the well from the surface and prevent downward migration of contaminants through the well annulus.
- (6) Description of the methods or procedures used to develop the wells.

2. Within 90 calendar days of EPA's approval of the submitted aquifer monitoring program, the Permittee shall submit a sampling and analysis plan capable of yielding representative samples for a comparison of upgradient and downgradient wells in this aquifer. The plan must include the following elements:

- a. An indication that the groundwater samples will, at a minimum, be sampled for phenols, naphthalene, lead and chromium.
- b. Well evacuation procedures including the volume to be evacuated prior to sampling, and handling procedures for purged well water.
- c. Sample withdrawal techniques. Sampling equipment and materials (tubing, rope, pumps, etc.) shall be selected to yield representative samples in light of parameters to be monitored for. The sampling protocol will include field measurement of pH, conductivity, and temperature for each sample.
- d. Sample handling and preservation techniques including provision for field-filtration of samples as appropriate.

- e. Procedures for decontaminating sampling equipment between sampling events.
 - f. Procedures for measuring groundwater elevations at each sampling event.
 - g. Chain of custody procedures to be used for all phases of sample management.
 - h. Laboratory analytical techniques, including EPA-approved analytical methods and quality assurance, quality control procedures.
 - i. Procedures for performing a comparison of upgradient and downgradient groundwater to determine whether contamination has occurred. The procedures should include:
 - (1) A proposed method (statistical or otherwise) to compare upgradient and downgradient well water that provides a reasonable balance between the probability of falsely identifying and failing to identify contamination.
 - (2) A proposed method of data organization and presentation.
3. Within 90 calendar days after the effective date of this permit, the Permittee shall propose a surface soil sampling and analysis plan for the Past Leaded Storage Tank Bottoms Disposal Area.
- a. Objectives of the plan:
 - (1) To determine if releases of hazardous constituents have occurred in this area.
 - (2) To determine the nature and magnitude of any such releases.
 - b. Elements of the plan:
 - (1) Proposed location for collecting soil samples.
 - (2) Proposed sampling procedures including sampling equipment, sample preservation techniques and equipment decontamination procedures.
 - (3) Chain of custody procedures to be used for all phases of sample management.
 - (4) A list of proposed parameters of analysis. The parameter list must be developed considering the nature and quantities of hazardous materials handled at this SWMU.

- (5) Laboratory analytical techniques, including EPA approved analytical methods and quality assurance, quality control procedures.
4. Within 90 days of EPA's approval of the soil sampling and analysis plan developed under item 3, the Permittee shall implement the plan, collect and analyze samples, and submit the results to EPA for review.
5. Within 90 calendar days of the effective date of this permit, the Permittee shall either 1) implement a program to bring the existing hazardous waste container storage facility into compliance with the requirements of RCRA, or 2) close the facility in accordance with RCRA requirements.
6. Within 90 calendar days after the effective date of this permit, the Permittee shall submit to EPA a groundwater monitoring plan for the West Yard Area.
- a. Objectives of the plan:
- (1) To characterize the hydrogeologic characteristics of the West Yard Area.
 - (2) To establish if hazardous constituents have been released from Past Disposal Areas 1, 2, 3, and 4.
- b. Requirements of the plan:
- (1) The upgradient well(s) must be capable of yielding samples that are representative of background water quality in the uppermost aquifer.
 - (2) The downgradient wells must be capable of immediately detecting any statistically significant amounts of hazardous constituents that migrate from the unit to the groundwater.
 - (3) The monitoring system must be designed to operate for a period of no less than 30 years.
- c. Elements to be included in the aquifer monitoring plan:
- (1) A description and map of proposed well locations, including a survey of each well's surface reference point and the elevation of the casing top.
 - (2) Size and depth of wells.
 - (3) Description of well intake design, including screen slot size and length, filter pack materials and method of filter-pack emplacement.

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- (4) Type of proposed well casing and screen materials; (The choice of well materials should be made in light of the parameters to be monitored and for the nature of the leachate that could potentially migrate from the West Yard units. The well materials should: (a) minimize the potential of absorption and desorption of constituents from the samples and (b) maintain their integrity from the expected life of the system (at least 30 years).
 - (5) Methods used to seal the well from the surface and prevent downward migration of contaminants through the well annulus.
 - (6) Description of the methods or procedures used to develop the wells.
7. Within 90 calendar days of EPA's approval of the West Yard groundwater monitoring program, the Permittee shall submit a sampling and analysis plan capable of yielding representative samples for a comparison of upgradient and downgradient wells in this area. The plan must include the following elements:
- a. A list of tentatively proposed parameters capable of detecting leakage of hazardous waste or hazardous constituents into groundwater, surface water, air, and soils. The proposed parameters should be representative of constituents which are at least as mobile as the most mobile constituents that should be chosen after considering:
 - (1) The types, quantities, and concentrations of constituents in wastes managed at the various SWMUs.
 - (2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area.
 - (3) The detectability of the indicator parameters, waste constituents or reactive products in groundwater.
 - (4) The concentration of volume and the natural variation (known or suspected) of the proposed monitoring parameter in background groundwater.

The list should include the basis for selecting each proposed indicator parameter, including any analysis or calculations performed. The list should also include parameters to characterize the site-specific chemistry of groundwater at the site.
 - b. Well evacuation procedures including the volume to be evacuated prior to sampling, and handling procedures for purged well water.

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- c. Sample withdrawal techniques. Sampling equipment and materials (tubing, rope, pumps, etc.) shall be selected to yield representative samples in light of parameters to be monitored for. The sampling protocol will include field measurement of pH, conductivity, and temperature for each sample.
 - d. Sample handling and preservation techniques including provision for field-filtration of samples as appropriate.
 - e. Procedures for decontaminating sampling equipment between sampling events.
 - f. Procedures for measuring groundwater elevations at each sampling event.
 - g. Chain of custody procedures to be used for all phases of sample management.
 - h. Laboratory analytical techniques, including EPA-approved analytical methods and quality assurance, quality control procedures.
 - i. Procedures for performing a comparison of upgradient and downgradient groundwater to determine whether contamination has occurred. The procedures should include:
 - (1) A proposed method (statistical or otherwise) to compare upgradient and downgradient well water that provides a reasonable balance between the probability of falsely identifying and failing to identify contamination.
 - (2) An accelerated sampling schedule to establish data for the comparison. (In no instance shall sampling exceed one month.)
 - (3) A proposed method of data organization and presentation.
8. Within 90 calendar days of the effective date of this permit, the Permittee shall submit a plan to upgrade the cover on West Yard Past Disposal Areas 1 and 2. The objectives of the cover improvements shall be to minimize the release of hazardous constituents to the air, soil, surface water and groundwater.
- a. Elements of the plan:
 - (1) Proposed materials for cover construction.
 - (2) Detailed cross sections showing cover design.
 - (3) The type of vegetative cover to be established on the units.

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At a minimum, the cover design shall meet or exceed the current design standards for RCRA regulated landfills.

9. Within 6 months of EPA's acceptance of the plan required under item 8, the Permittee shall implement the plan, and construct the cover.
10. Within 90 calendar days after the effective date of this permit, the Permittee shall propose a water and sediment sampling and analysis plan for the Guard Basin.
 - a. Objectives of the plan:
 - (1) To determine if releases of hazardous constituents have occurred from South Yard Disposal Areas 3, 4 and 5.
 - (2) To determine the nature and magnitude of any such releases.
 - b. Elements of the plan:
 - (1) Proposed location for collecting sediment and water samples.
 - (2) Proposed sampling procedures including sampling equipment, sample preservation techniques and equipment decontamination procedures.
 - (3) Chain of custody procedures to be used for all phases of sample management.
 - (4) The plan must specify that all samples shall be analyzed for the list of Priority Pollutants.
 - (5) Laboratory analytical techniques, including EPA-approved analytical methods and quality assurance, quality control procedures.
11. Within 90 days of EPA's approval of the sampling and analysis plan developed under item 10, the Permittee shall implement the plan, collect and analyze samples, and submit the results to EPA for review.
12. All plans, reports and schedules required by the terms of this permit are, upon approval by EPA, incorporated into this permit. Any noncompliance with such approved studies, reports, or schedules shall be termed noncompliance with this permit.
13. In the event of Agency disapproval (in whole or in part) of any plan required by this permit, EPA shall specify any deficiencies in writing. The Permittee shall modify the plan to correct the deficiencies within 30 days from receipt of

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disapproval by EPA. The modified plan shall be submitted to EPA in writing for review. Should the Permittee take exception to all or part of EPA's disapproval, the Permittee shall submit to EPA a written statement of the grounds for the exception. Representatives of EPA and the Permittee may confer in person or by telephone in an attempt to resolve any disagreement. If agreement is reached, the resolution shall be reduced to writing and signed by representatives of each party. In the event that resolution is not reached within 15 days, the Permittee shall modify the plan as required by EPA.

B. RECORDKEEPING AND REPORTING

1. Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with 40 CFR §§264.73(b)(9) (Waste Minimization).

C. PERMIT MODIFICATION

The Regional Administrator will modify the permit in accordance with 40 CFR §270.41 and Section 3005(c) of RCRA, in the event the Remedial Investigation required in the permit's specific conditions found in II.A., or any other information available to the Regional Administrator, identifies solid waste management units that require corrective measures. Financial assurance by the applicant is required if corrective measures are necessary.

D. DEFINITIONS

Release - any spilling, leaking, pumping, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment.

Solid Waste Management Unit - any landfill, surface impoundment, waste pile, land treatment unit, incinerator, tank (including storage, treatment, and accumulation tanks), container storage units, injection wells, wastewater treatment units, elementary neutralization units, transfer stations, and recycling units that received solid or hazardous waste at any time.

Facility - all contiguous property under the control of the owner or operator at which the units subject to permitting are located.

Date Signed

Stephen R. Wassersug, Director
Hazardous Waste Management Division

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(Red)

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B. RECORDKEEPING AND REPORTING

1. Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with 40 CFR §§264.73(b)(9) (Waste Minimization).

C. PERMIT MODIFICATION

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D. DEFINITIONS

Release - any spilling, leaking, pumping, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment.

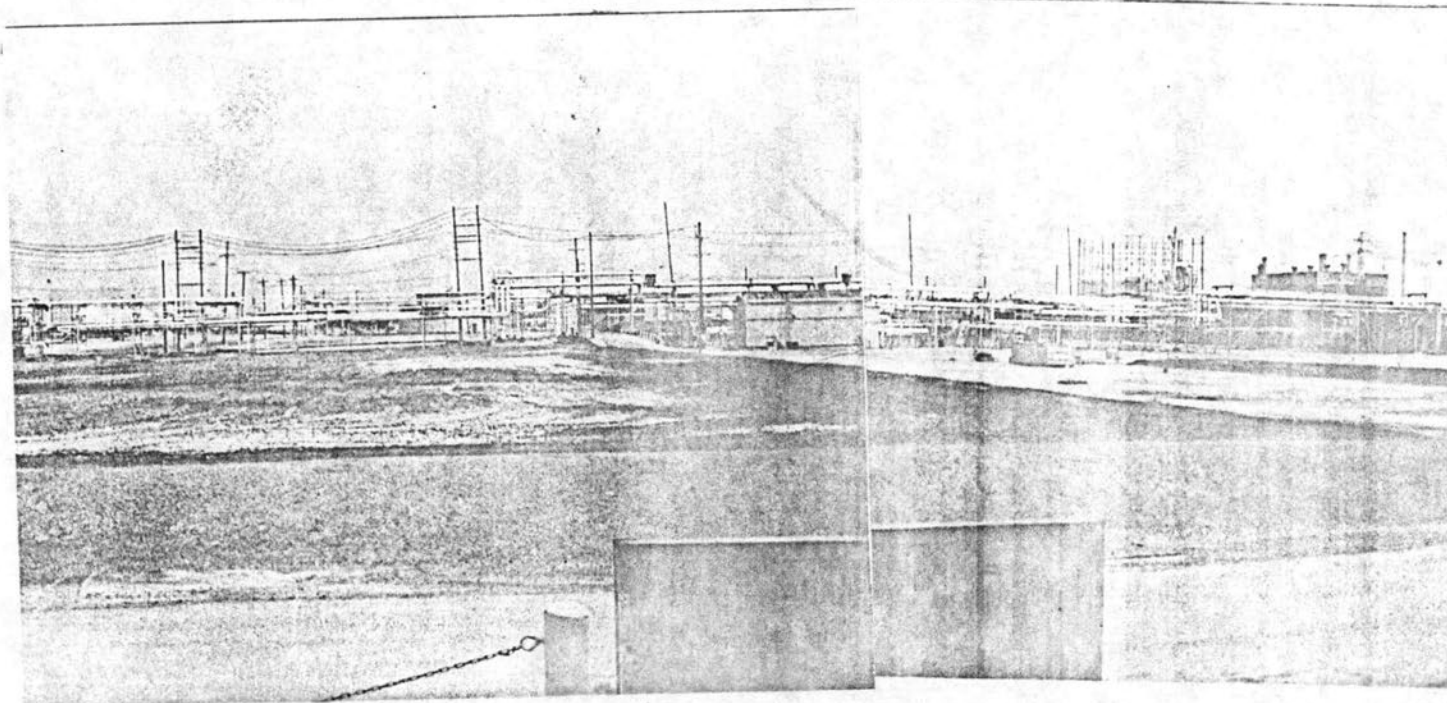
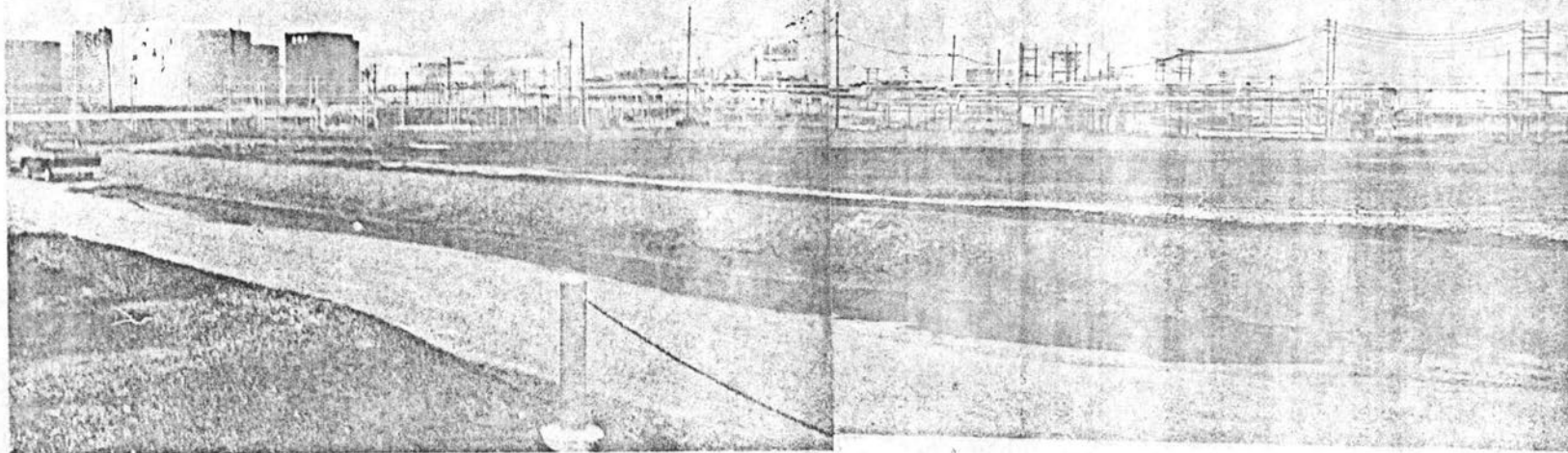
Solid Waste Management Unit - any landfill, surface impoundment, waste pile, land treatment unit, incinerator, tank (including storage, treatment, and accumulation tanks), container storage units, injection wells, wastewater treatment units, elementary neutralization units, transfer stations, and recycling units that received solid or hazardous waste at any time.

Facility - all contiguous property under the control of the owner or operator at which the units subject to permitting are located.

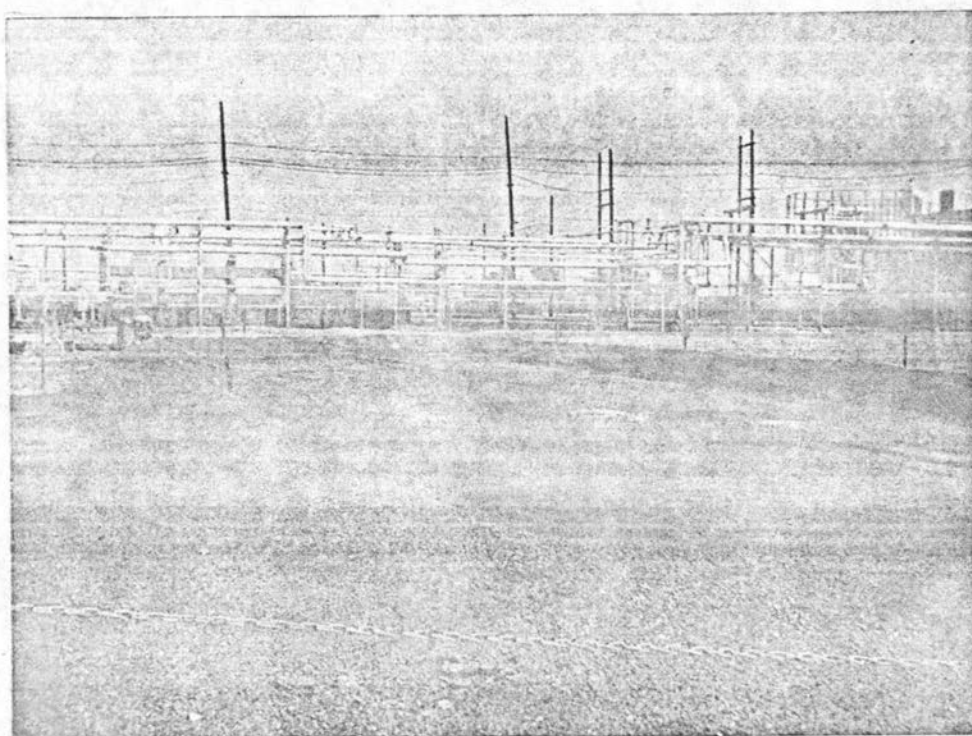
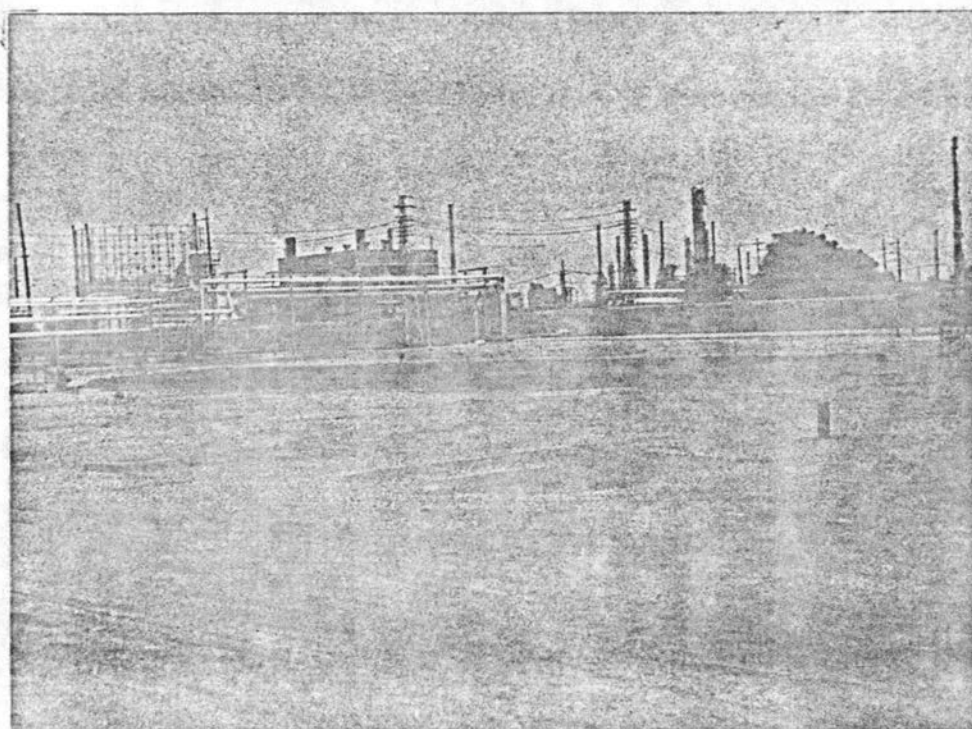
Date Signed

Stephen R. Wassersug, Director
Hazardous Waste Management Division

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PHOTOS 3 AND 4 - LAND TREATMENT FACILITY



PHOTOS 5 AND 6 - LEADED STORAGE TANK BOTTOMS WASTE PILE

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(Red)

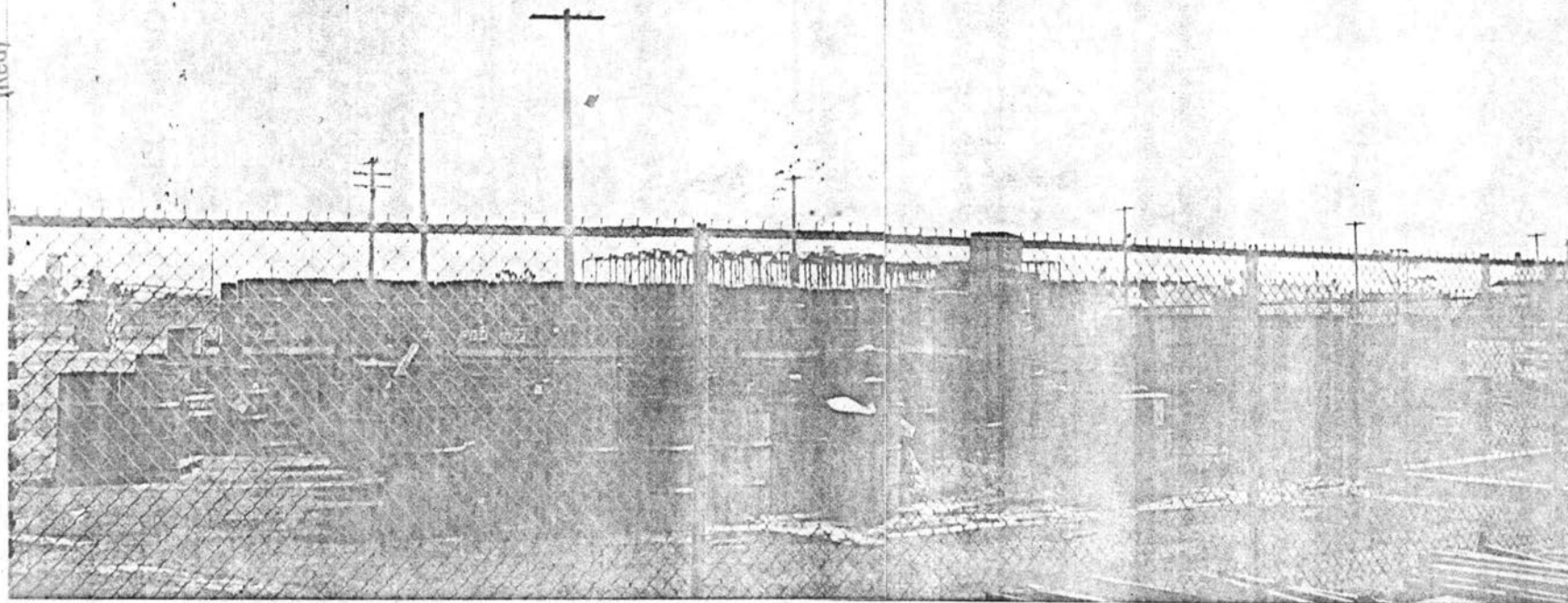
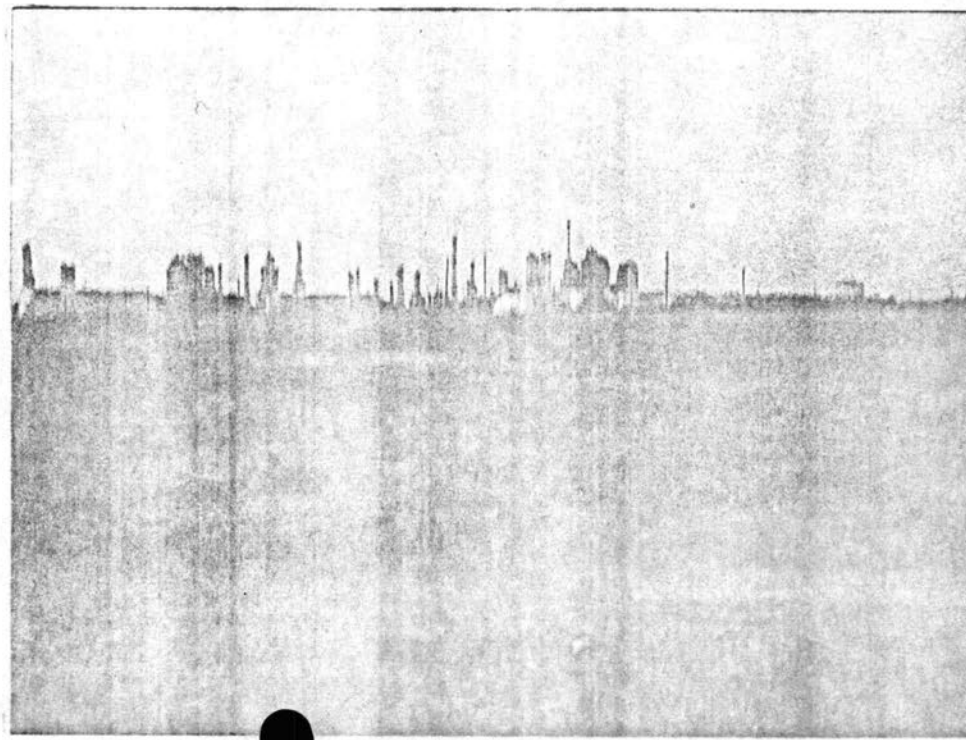
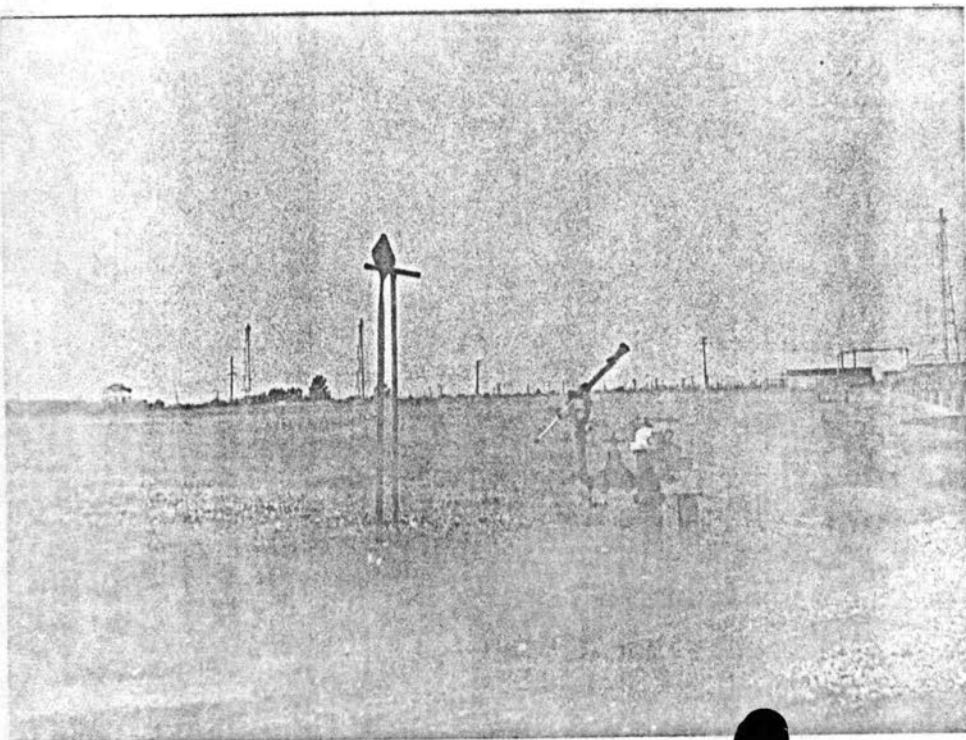


PHOTO 7 - DRUM STORAGE AREA



PHOTOS 8 AND 9 - PAST DISPOSAL AREA 3 AND 4 (SOUTH YARD)

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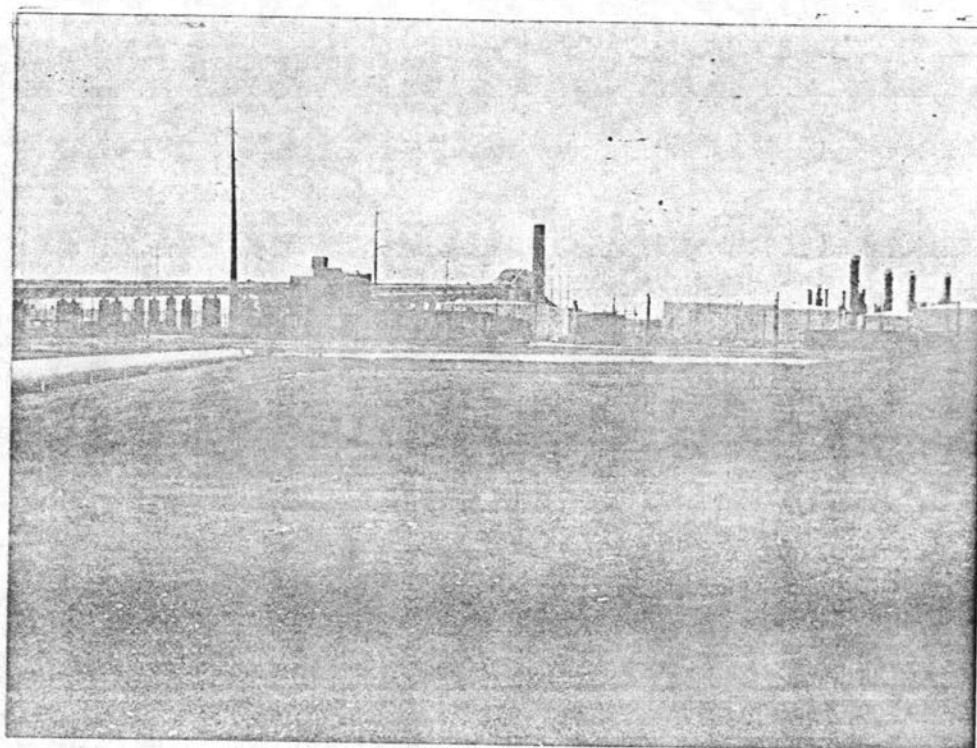


PHOTO 10 - PAST LEADED STORAGE TANK
BOTTOMS DISPOSAL AREA #5 (SOUTH YARD)

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(Red)

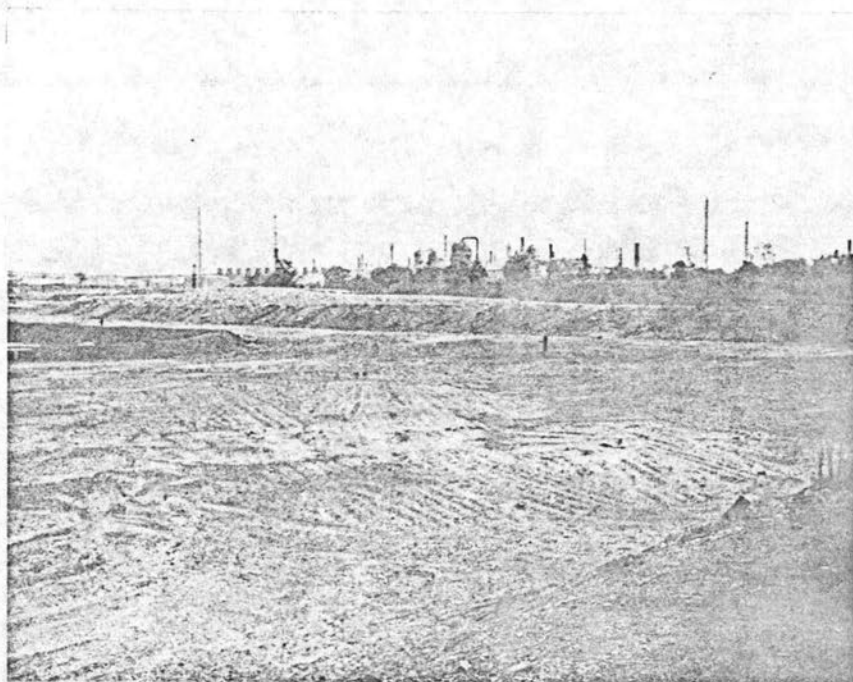


PHOTO 11 - PAST DISPOSAL AREA 1 (WEST YARD)

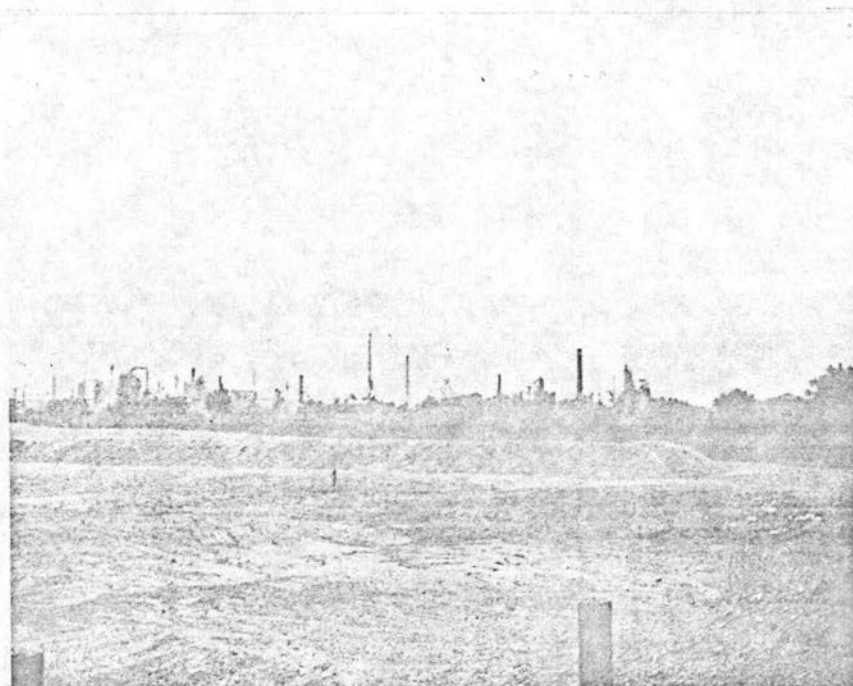


PHOTO 12 - PAST DISPOSAL AREA 1 (WEST YARD)

ORIGINAL
(Red)

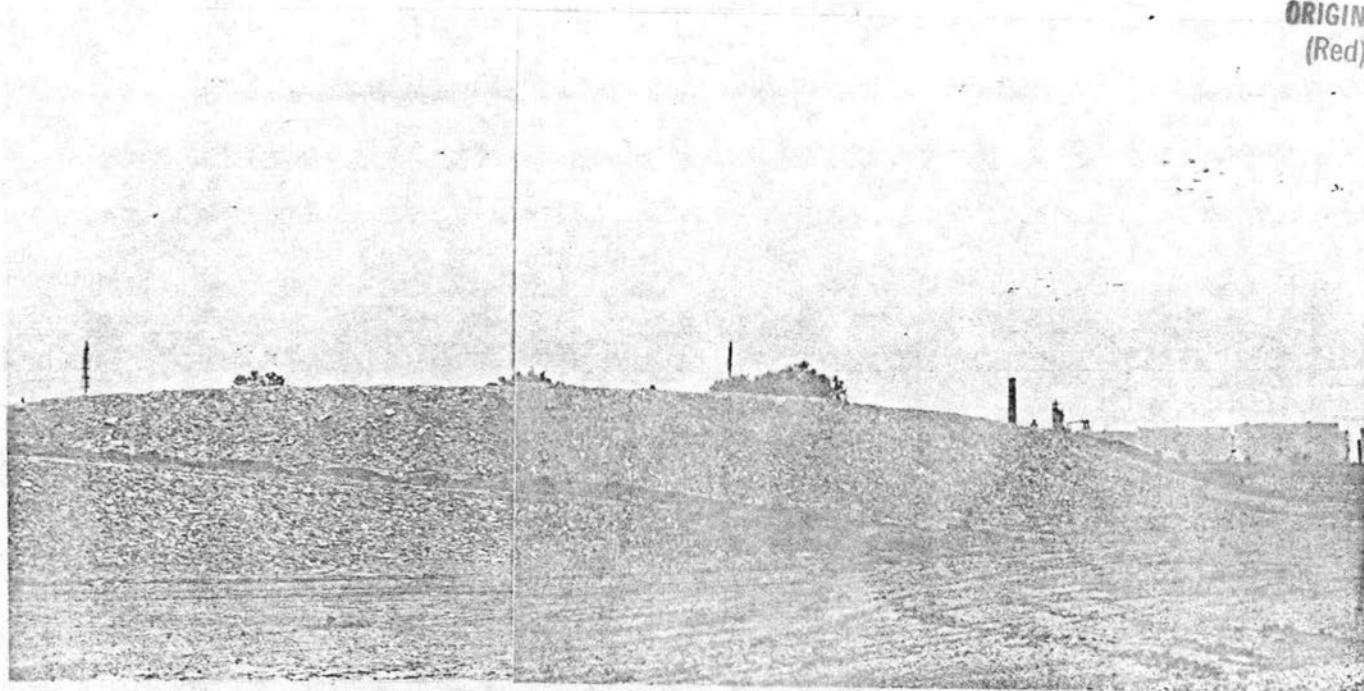


PHOTO 13 - PAST DISPOSAL AREA #2 (WEST YARD)

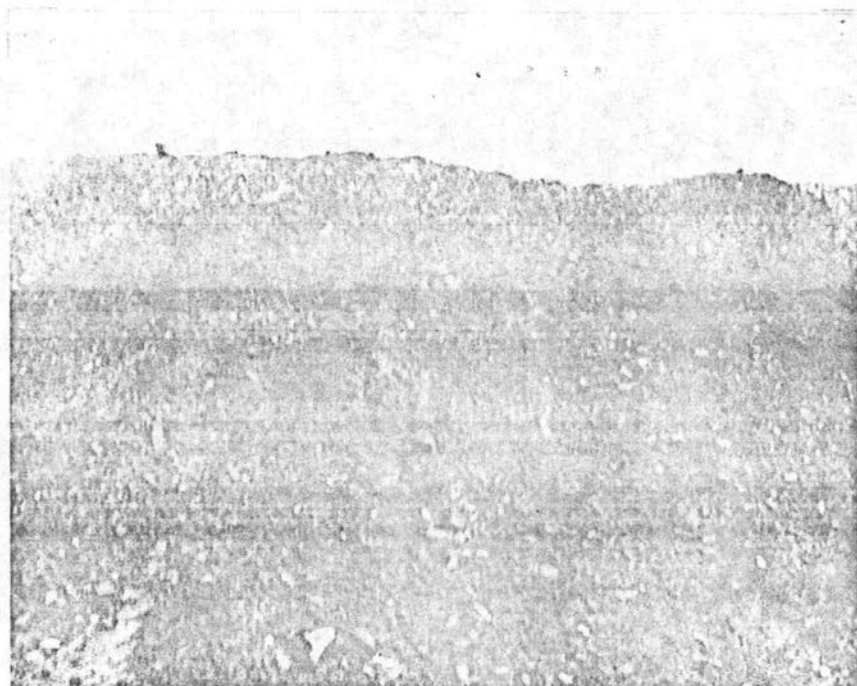
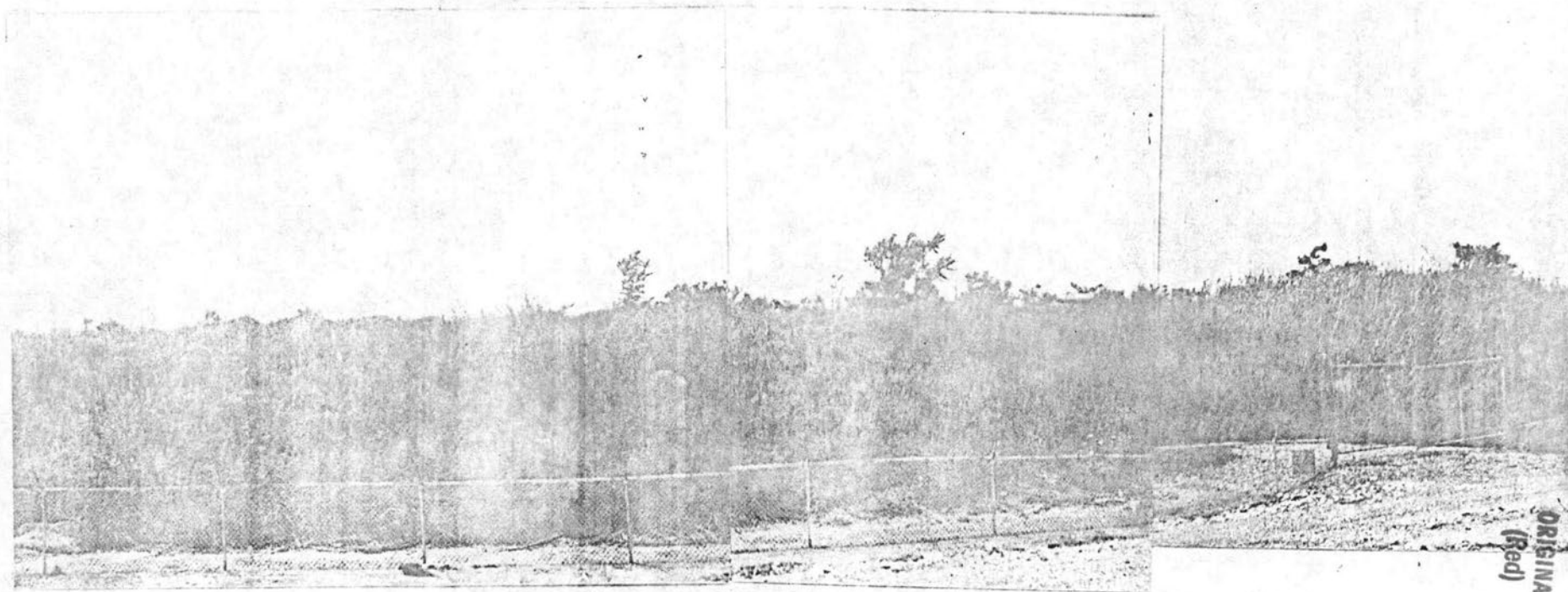
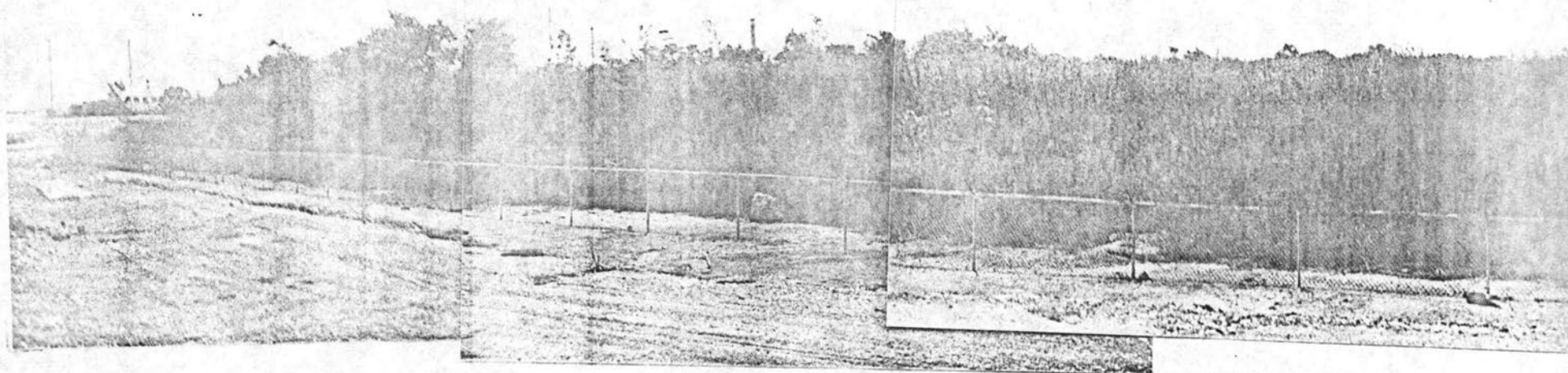


PHOTO 14 - PAST DISPOSAL AREA #2-SEEP (WEST YARD)



ORIGINAL
(Red)

PHOTOS 15 AND 16 - PAST DISPOSAL AREA #3 (WEST YARD)

ORIGINAL
(Red)

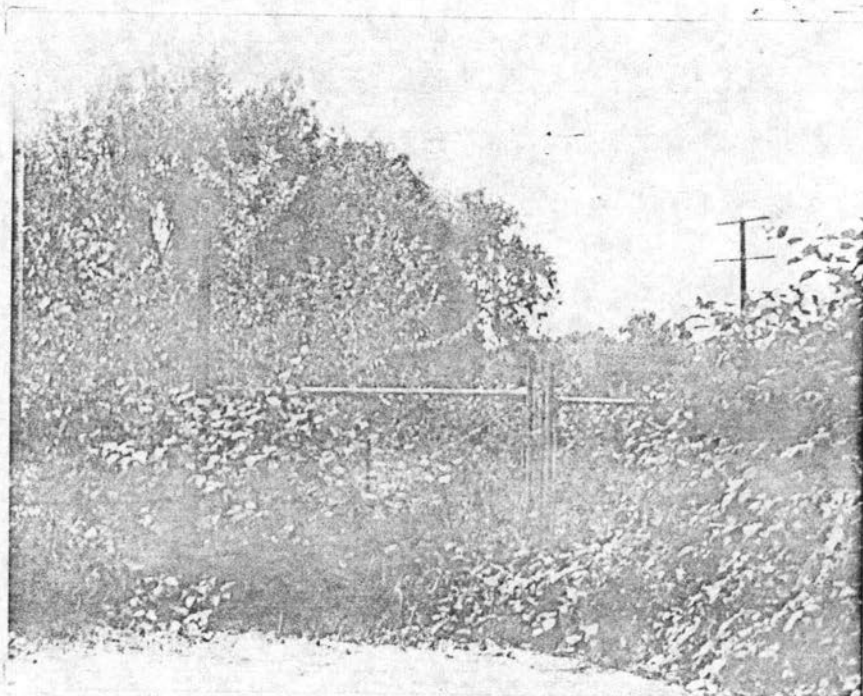


PHOTO 17 - PAST DISPOSAL AREA #4 (WEST YARD)

PART II - SPECIFIC CONDITIONS

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A. CORRECTIVE ACTION

Section 3004(u) of RCRA (40 CFR §264.101) requires corrective action for all releases of hazardous waste or hazardous constituents from any solid waste management unit, at a treatment, storage, or disposal unit, regardless of when wastes were placed in the unit, for all permits issued after November 8, 1984.

For Atlantic Refining and Marketing Company, Philadelphia Refinery, preliminary assessment information was developed through information provided in the facility's RCRA Part B Permit Application, the SWMU Response Letter, from information obtained from EPA and PA DER files, and through information obtained during the site investigation conducted August 6, 1986.

The permit requires Atlantic Refining and Marketing Company to 1) develop and implement a supplemental groundwater monitoring program for the Land Treatment Facility and the Leaded Storage Tank Bottoms Waste Pile, 2) sample soils around the Past Leaded Storage Tank Bottoms Disposal Area, 3) perform the necessary actions to bring the existing hazardous waste storage facility into compliance, 4) develop and implement a groundwater monitoring plan for the West Yard Disposal Areas, 5) upgrade the cover on West Yard Disposal Areas 1 and 2, and 6) develop and implement a water and sediment analysis program for the Guard Basin.

1. Within 90 calendar days after the effective date of this permit, the Permittee shall submit to EPA a supplemental groundwater monitoring plan for the Land Treatment Facility and Leaded Storage Tank Bottoms Waste Pile Areas.

a. Objectives of the plan:

- (1) To establish the presence of hazardous constituents in the uppermost aquifer that may be resulting from the Land Treatment Facility and the Leaded Storage Tank Bottoms Waste Pile Area.

b. Requirements of the plan:

- (1) The downgradient wells must be capable of immediately detecting any statistically significant amounts of hazardous constituents that migrate from the unit to the groundwater.
- (2) The monitoring system must be designed to operate for a period of no less than 30 years.

c. Elements to be included in the aquifer monitoring plan:

- (1) A description and map of proposed well locations, including a survey of each well's surface reference point and the elevation of the casing top.
- (2) Size and depth of wells.
- (3) Description of well intake design, including screen slot size and length, filter pack materials and method of filter-pack emplacement.
- (4) Type of proposed well casing and screen materials; (The choice of well materials should be made in light of the parameters to be monitored and for the nature of the hazardous constituents that could potentially migrate from the facility. The well materials should: (a) minimize the potential of absorption and desorption of constituents from the samples and (b) maintain their integrity from the expected life of the system (at least 30 years).
- (5) Methods used to seal the well from the surface and prevent downward migration of contaminants through the well annulus.
- (6) Description of the methods or procedures used to develop the wells.

2. Within 90 calendar days of EPA's approval of the submitted aquifer monitoring program, the Permittee shall submit a sampling and analysis plan capable of yielding representative samples for a comparison of upgradient and downgradient wells in this aquifer. The plan must include the following elements:

- a. An indication that the groundwater samples will, at a minimum, be sampled for phenols, naphthalene, lead and chromium.
- b. Well evacuation procedures including the volume to be evacuated prior to sampling, and handling procedures for purged well water.
- c. Sample withdrawal techniques. Sampling equipment and materials (tubing, rope, pumps, etc.) shall be selected to yield representative samples in light of parameters to be monitored for. The sampling protocol will include field measurement of pH, conductivity, and temperature for each sample.
- d. Sample handling and preservation techniques including provision for field-filtration of samples as appropriate.

- e. Procedures for decontaminating sampling equipment between sampling events.
 - f. Procedures for measuring groundwater elevations at each sampling event.
 - g. Chain of custody procedures to be used for all phases of sample management.
 - h. Laboratory analytical techniques, including EPA-approved analytical methods and quality assurance, quality control procedures.
 - i. Procedures for performing a comparison of upgradient and downgradient groundwater to determine whether contamination has occurred. The procedures should include:
 - (1) A proposed method (statistical or otherwise) to compare upgradient and downgradient well water that provides a reasonable balance between the probability of falsely identifying and failing to identify contamination.
 - (2) A proposed method of data organization and presentation.
3. Within 90 calendar days after the effective date of this permit, the Permittee shall propose a surface soil sampling and analysis plan for the Past Leaded Storage Tank Bottoms Disposal Area.
- a. Objectives of the plan:
 - (1) To determine if releases of hazardous constituents have occurred in this area.
 - (2) To determine the nature and magnitude of any such releases.
 - b. Elements of the plan:
 - (1) Proposed location for collecting soil samples.
 - (2) Proposed sampling procedures including sampling equipment, sample preservation techniques and equipment decontamination procedures.
 - (3) Chain of custody procedures to be used for all phases of sample management.
 - (4) A list of proposed parameters of analysis. The parameter list must be developed considering the nature and quantities of hazardous materials handled at this SWMU.

FACT SHEET

FOR HAZARDOUS WASTE STORAGE PERMIT
ATLANTIC REFINING AND MARKETING COMPANY
PAD 002 289 700

This fact sheet has been developed for EPA's portion of the full draft Resource Conservation and Recovery Act (RCRA) permit which EPA and the Commonwealth of Pennsylvania intend to issue to Atlantic Refinery and Marketing Company (Permittee) for its storage facility located in Philadelphia, Pennsylvania. The full RCRA permit is comprised of EPA's permit, which addresses the provisions of Hazardous and Solid Waste Amendments of 1984 (HSWA), and the Commonwealth of Pennsylvania permit, which addresses that portion of RCRA for which the Commonwealth of Pennsylvania is authorized. The Commonwealth of Pennsylvania is authorized to administer and enforce those portions of RCRA in effect prior to the enactment of the HSWA. This fact sheet was prepared in accordance with the requirements of 40 CFR §124.8.

A. PURPOSE OF THE PERMITTING PROCESS

The purpose of the permitting process is to afford the Environmental Protection Agency (EPA), interested citizens and other governmental agencies the opportunity to evaluate the ability of the Permittee to comply with the applicable hazardous waste management requirements promulgated under the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA) 42 U.S.C. §§6901-6987. EPA is required to prepare a draft permit which sets forth in one concise document all the applicable requirements with which the Agency intends to require the Permittee to comply during the ten-year duration of the permit. The public is given forty-five days to review and comment on the draft permit conditions prior to EPA taking any final action on EPA's draft permit.

B. PROCEDURES FOR REACHING A FINAL DECISION

Section 7004(b) of RCRA and 40 CFR §124.10 require that the public be given forty-five (45) days to comment on each draft permit prepared under the Resource Conservation and Recovery Act. The comment period will begin on _____ and will end on _____. Any person interested in commenting on this draft permit must do so within this forty-five (45) day comment period.

All persons wishing to comment on any of the permit conditions should submit the comments in writing to the Environmental Protection Agency (EPA), Region III, at 841 Chestnut Building, Philadelphia, Pennsylvania 19107, Attention: Mr. Gilbert Horwitz. Comments should include all reasonably available references, factual grounds and supporting material.

In the event EPA receives written objection to the draft permit conditions or permit application and a request for a public hearing

within the comment period referenced above, a hearing shall be scheduled at a location convenient to the population center nearest to the proposed facility. Public notice of the public hearing shall be given at least 30 days before the hearing. Any requests for a public hearing accompanied by written opposition to the draft permit should be addressed to Mr. Gilbert Horwitz at the EPA address above.

When making a determination regarding the issuance of this permit to Atlantic Refinery and Marketing Company, EPA will consider all written comments received during the public hearing (if requested), the requirements of the hazardous waste regulations of 40 CFR Parts 124, 260-264, and 270, the Agency's permitting policies, and the HSWA.

When EPA makes a final decision to either issue, deny or modify this permit, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision. The final permit decision shall become effective thirty (30) days after the service or review is requested under 40 CFR §124.19. If no comments requested a change in this draft permit, the final permit shall become effective immediately upon issuance.

Contact person for the Atlantic Refinery and Marketing Company draft permit is:

Mr. Gilbert Horwitz
U.S. Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107
(215) 597-7259

C. FACILITY DESCRIPTION

1. General

Atlantic Refining and Marketing Company, Philadelphia, Pennsylvania has applied to the Commonwealth of Pennsylvania and EPA for a permit to continue to treat hazardous waste generated at the Philadelphia Refinery. The unit consists of a land treatment unit used to treat oily sludges which result from the treatment of wastewater from petroleum refining operations.

2. Solid Waste Management Units

The following units at the facility have been identified as solid waste management units and, as such, are subject to the continuing release provision of Section 3004(u) of RCRA. With the exception of the Asbestos Storage Skids and the components of the wastewater treatment system, additional investigation and/or corrective action is necessary at all units.

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Land Treatment Facility: This unit converts the hazardous wastes (K048 and K052) into nonhazardous waste via biological breakdown and metal stabilization. The facility was started in 1979 and covers an area of 13.5 acres with the North Yard.

Leaded Storage Tank Bottoms Waste Pile: This unit is a waste pile in which sludge from leaded storage tanks is placed for weathering. The unit has a concrete base with 12" of clay and three-foot-high berms surrounding it. Dimensions of the unit are approximately 140 feet by 47 feet and has a minimum capacity of 150 cubic yards.

Past Leaded Storage Tank Bottoms Disposal Area: This unit managed leaded storage tank bottoms from the 1950's until 1980. The unit was closed and all wastes removed when it was determined the area was larger than needed due to waste generation reductions.

Drum Storage Area: This unit is a subsection within the plant's container storage area. The total area containing the hazardous waste (primarily tetraethyl lead contaminated rags and gloves) covers an area of 100 square feet. The unit has a sloped, macadam base and is surrounded by a six-inch concrete berm.

Past Disposal Area #3: This unit, constructed of naturally occurring soils and fill, covered an area of 50 feet by 275 feet. Prior to its closure in the mid-1960's, the unit managed cooling tower wastes and other refining wastes.

Past Disposal Area #4: This unit covered an area of approximately 100 feet by 275 feet. As with the Past Disposal Area #3, this unit managed cooling tower wastes and other refining wastes.

Past Leaded Storage Tank Bottoms Disposal Area #5: This unit was closed prior to 1980 and the dimensions were 100 feet by 50 feet. The unit managed leaded gasoline storage tank bottoms within its naturally occurring soils and fill material.

Past Disposal Area #1: This unit was a land disposal area approximately 200 feet by 530 feet. During its operating period, the unit managed wastes from petroleum refining related activities. The unit's clay cap has been compacted to achieve 10^{-7} cm/sec. permeability.

Past Disposal Area #2: This unit was a land disposal area approximately 300 feet by 400 feet. During its period of operation the unit managed spent acids and caustic wastes along with refining wastes. As with the Past Disposal Area #1, this unit was capped with clay to achieve 10^{-7} cm/sec permeability.

Past Disposal Area #3 and #4: This unit was a land disposal area approximately 1,600 feet by 400 feet. The unit managed petroleum refining wastes and was closed in the mid-1960's.

Dissolved Air Flotation: This unit manages effluent from the API separator. It is an inground concrete tank which was started in 1962. It has a high overflow weir which discharges to the Schuylkill River via an NPDES permit.

Tank 7310: This unit is a steel tank, 21'-7" high with a 30' diameter. It was installed in 1955 and dewateres DAF float. The unit is within the Wastewater Treatment Plant.

Tank 7311: This unit is also a steel tank, 21'-7" high and 30' diameter. It dewateres DAF float and is located within the Wastewater Treatment Plant. The unit uses a mixer to make homogeneous mixtures for the centrifuge.

Tank 7318: This unit receives the clarified DAF float from Tanks 7310 and 7311. It is a closed top, steel constructed unit and is part of the Wastewater Treatment Plant.

Sludge Skids: This unit is used for temporary storage and hauling of slop oil emulsion sludge. It has a maximum capacity of 3,030 gallons per skid. When started in 1975 it consisted of four 20 cu. yd. roll-off containers, however it has been reduced to one as waste generation decreased.

Permutit Dual Cell Gravity Units: This unit was installed in 1978 and its purpose was to dewater DAF sludge and slop oil emulsions via chemical and physical methods, however the unit did not function properly and has been put out of service.

Slop Oil Emulsions Centrifuge: This unit is a scroll centrifuge which acts as a dewatering/grit separator. It was started in 1975 and manages slop oil emulsions and DAF float. It is part of the Wastewater Treatment Plant.

API Separator: These two API separators are part of the Wastewater Treatment Plant and manages EPA - K048, K049, and K051 waste.

Bio-Sludge Aeration Basin: This unit receives effluent from the DAF unit. It is made of steel and has a capacity of 3.5 million gallons per day. The effluent from this unit is discharged via the NPDES permit. It is part of the Wastewater Treatment Plant.

Asbestos Storage Skids: This unit consists of two steel, roll-off containers with an approximate capacity of 20 cu. yds. It was started in 1980 to store asbestos waste in bags. All bags are wetted to ensure that the asbestos does not become airborne.

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Guard Basin: This unit is a pond which was dredged in the mid-1970's to collect stormwater from the Tank Farm area. The basin has a capacity of approximately 7.5 million gallons.

D. HAZARDOUS AND SOLID WASTES AMENDMENTS

Continuing Releases at Permitted Facilities

Background

One of the most important provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA) is the new requirement for corrective action for continuing releases. This provision is established in Section 3004(u) of RCRA (Section 206 of the HSWA), promulgated as regulations 40 CFR §264.101, 50 Fed. Reg. 28747 (July 15, 1985) as follows:

"Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in such unit. Permits issued under section 3002 [RCRA] shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action."

The intent of Congress in establishing this new permit requirement was to correct a perceived shortcoming in the existing statute and RCRA regulations, which allow operating permits to be issued to facilities at which environmental contamination is occurring or has occurred, without the permit addressing that contamination. All permit applicants must now (a) identify all solid waste management units at the facility, (b) identify any releases that have occurred or are occurring from these units, (c) take appropriate corrective action to clean up those releases, and (d) demonstrate financial assurance for those corrective actions.

The provision on continuing releases was effective on the date of enactment (November 8, 1984). Thus, a permit issued after that date must address this provision.

The basic standard for imposing corrective action at Atlantic Refinery and Marketing Company is protection of human health and the environment. The permit will address corrective action when there is or has been a release at the facility that poses a threat to human health and the environment. A substantial threat to human health and the environment is assumed if there is a likelihood of a

release from a solid waste management unit into the air, surface (Red)
water, groundwater, or soil.

Implementation

A. Assessment of need for corrective action

1. Submission of Preliminary Assessment
2. Performance of Site investigation

B. Remedial investigations and development of proposed programs of corrective action

1. Remedial investigations by owner/operator to identify/characterize releases
2. Development of a proposed program of corrective action, if necessary, and cost estimate

C. Selecting and performing corrective action

1. Establishing the program for corrective action
2. Demonstration of financial assurance
3. Conducting corrective action

Stage A of this implementation process has been completed. A site investigation was conducted on August 6, 1986. EPA has prepared a RCRA Facility Assessment Report which provides recommendations on the need for further studies at this facility. The draft permit requires the Permittee to continue with a proposal for site investigation. Based on the results of this investigation, EPA will evaluate the need for corrective action. If EPA finds that further studies and/or corrective action is warranted, EPA will propose a major permit modification and follow appropriate procedures which include a public notice period and a public hearing, if requested.

PART I

STANDARD CONDITIONS

Part I of the permit sets forth the standard procedural conditions that are applicable to all hazardous waste management facilities. Unless otherwise specified, all citations refer to the regulations as coded in Title 40 of the Code of Federal Regulations (40 CFR).

<u>Permit Conditions</u>	<u>Subject</u>	<u>Requirement</u>
I.A	Effect of Permit	\$270.4 \$270.30(g)
I.B	Permit Actions	\$270.30(f) \$270.41* \$270.42 \$270.43
I.BB	Establishing Permit Conditions	\$270.32(b)(2)*
I.C	Severability	\$124.6(a)
I.D	Definitions	Part 260.10 Part 270.2
I.E	Reports, Notifications, and Submissions to the Regional Administrator	
I.F	Signatory Requirement	\$270.11 \$270.30(k)
I.G	Documents to be Maintained at Facility Site	\$264.12 \$264.16(d) \$264.53(a) \$264.112(a) \$264.73 \$264.15(b) \$264.142(d)
I.H	Duties and Requirements	
I.H.1	Duty to Comply	\$270.30(a)
I.H.2	Duty to Reapply	\$270.10(h) \$270.30(b)

Other Provisions

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A number of other provisions in HSWA became effective November 8, 1984. New provisions concerning the standards for owners and operators of hazardous waste management facilities and provisions concerning general permit conditions were promulgated as final regulations on July 15, 1985 (50 Fed. Reg. 28742). Two provisions in addition to that pertaining to corrective action for continuing release apply to this permit.

The provision contained in Section 3005(c)(3) of RCRA (Section 212 of HSWA), promulgated at 40 CFR §270.32(b)(2), authorizes EPA or the State to establish any term or condition in the permit determined necessary to protect human health and the environment (see Permit Condition I.BB). Section 3005(h) of RCRA (Section 224 of HSWA) requires that, as of September 1, 1985, permittees of hazardous waste management facilities located on the premises of the generator must certify that certain minimization practices have been established. This requirement has been incorporated into the regulation concerning the Operating Record of the facility (40 CFR §264.73(b)(9) (See Permit Condition II.B.1). Regulation 40 CFR §264.73(j)(2) was revised to clarify that this operating standard must be a condition of the Permit (see Permit Condition I.H.9).

E. PERMIT ORGANIZATION

The permit is divided into the parts as outlined below.

<u>Part</u>	<u>Topic</u>
I	Standard Conditions
II	Specific Conditions

Part I contains conditions which apply to all hazardous waste facilities. Part II pertains specifically to the solid waste management facility at Atlantic Refining and Marketing Company.

F. SUMMARY OF THE PERMIT CONDITIONS

This section of the fact sheet provides a summary of the conditions in this draft permit.

I.H.3	Permit Expiration and Continuation	§270.51 §270.50
I.H.4	Need to Halt or Reduce Activity	§270.30(c)
I.H.5	Duty to Mitigate	§270.30(d)
I.H.6	Proper Operation and Maintenance	§270.30(e)
I.H.7	Duty to Provide Information	§270.30(h) §260.74(a)

I.H.8	Inspection and Entry	\$270.20(i)
I.H.9	Monitoring and Records	\$270.30(j)*
I.H.10	Planned Changes and Anticipated Non-Compliance	\$270.30(1)(1) and (2)
I.H.11	Transfer of Permits	\$270.40 \$270.30(1)(3) \$270.42(d)
I.H.12	Twenty-four Hour Reporting of Non-Compliance	\$270.30(1)(6) \$264.56(d)(1) and (2)
I.H.12.1	Immediate Reporting of Releases	\$264.56(d)(1) and (2)
I.H.13	Other Non-Compliance	\$270.30(1)(10)
I.H.14	Other Information	\$170.30(1)(11)

*50 Fed. Reg. 28752 (July 15, 1985)

PART II

SPECIFIC CONDITIONS

Part II of the permit sets forth the specific conditions with which the Permittee must comply. All provisions required by this part are authorized by Section 206, 212 and 224 of HSWA, which amends Sections 3004 and 3005 of RCRA

Permit ConditionSubject

II.A

Corrective Action

II.B

Recordkeeping and Reporting

II.C

Permit Modifications

II.D

Definitions

*50 Fed. Reg. 28752 (July 15, 1985)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PERMIT

FOR HAZARDOUS WASTE STORAGE

Permittee: Atlantic Refining and Marketing Company

Permit Number: PAD 002 289 700

Facility: Philadelphia Refinery

This permit is issued by the United States Environmental Protection Agency (EPA) under authority of the Resource Conservation and Recovery Act, Subtitle C, 42 U.S.C. §§6921-6931 (1976, as amended by Supp. IV, 1980 (RCRA), and the Hazardous and Solid Waste Amendments of 1984 (HSWA)) and EPA regulations, Atlantic Refining and Marketing Company (hereafter called the Permittee), to operate a hazardous waste management facility located in Philadelphia, Pennsylvania.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (Parts I and II) and the applicable regulations contained in 40 CFR Parts 260 through 264 and 124 and 270 as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of this permit. (See 40 CFR §270.32(c)).

This permit is based on the assumption that the information in the Permittee's RCRA Part B permit application dated August 8, 1984 is accurate. Further, this permit is based in part on the provisions of Sections 206, 212, and 224 of the Hazardous and Solid Waste Amendments of 1984, which modify Sections 3004 and 3005 of RCRA. In particular, Section 206 requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit, regardless of the time at which waste was placed in such unit and provides authority to review and modify the permit at any time. Any inaccuracies found in the submitted information may be grounds for the termination or modification of this permit (see 40 CFR §270.41, §270.43 and §270.42) and potential enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

PART I - STANDARD CONDITIONS

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A. EFFECT OF PERMIT

This permit authorizes only the management of hazardous waste expressly described in this permit and does not authorize any other management of hazardous waste. EPA will consider compliance with the terms of this permit to be compliance with the requirements of RCRA Subtitle C and EPA regulations concerning the management of hazardous waste described in this permit. The full RCRA permit is comprised of EPA's permit, which addresses the provisions of the Hazardous and Solid Waste Amendments of 1984, and the Commonwealth of Pennsylvania is authorized to administer and enforce those portions of RCRA that were in effect prior to the enactment of the Hazardous and Solid Waste Amendments of 1984. This permit which addresses the Hazardous and Solid Waste Amendments of 1984 will be enforced by EPA. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local laws or regulations. Compliance with the terms of this permit does not constitute a defense to any action brought under Section 7003 of RCRA (42 USC §6973), Section 106 (a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC §9606(a) commonly known as CERCLA), or any other law governing protection of public health or the environment. (40 CFR §§270.4, 270.30(g))

B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR §270.41, §270.43, and §270.42. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations.

BB. PERMIT CONDITIONS

Pursuant to Section 3005(c)(3) of RCRA (Section 212 of HSWA), promulgated as regulation 40 CFR §270.32(b), this permit contains those terms and conditions determined necessary to protect human health and the environment.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such

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provision to other circumstances and the remainder of this permit shall not be affected thereby. (40 CFR §124.16(a))

D. DEFINITIONS

For the purpose of this permit, terms used herein shall have the same meaning as those set forth in Title 40 of the Code of Federal Regulations (40 CFR Parts 260 and 270), unless this permit specifically states otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. "Regional Administrator" is the Regional Administrator of the United States Environmental Protection Agency for EPA Region III.

E. REPORTS, NOTIFICATIONS AND SUBMISSIONS TO THE REGIONAL ADMINISTRATOR

All reports, notifications or other submissions which are required by this permit to be sent or given to the Regional Administrator should be sent certified mail or given to:

Director, Hazardous Waste Management Division
EPA Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107
Telephone Number:
(215) 597-8131

F. SIGNATORY REQUIREMENTS

All reports or other information requested by the Regional Administrator shall be signed and certified as required by 40 CFR §§270.11, 270.30(k).

G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY SITE

The Permittee shall maintain at the facility all documents required by Parts I and II of this permit, and amendments, revisions and modifications to these documents.

H. DUTIES AND REQUIREMENTS

1. Duty to Comply. The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any other permit noncompliance constitutes a violation of RCRA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. (40 CFR §270.30(a))
2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must submit a complete application

for a new permit at least 180 days before this permit expires.
(40 CFR §§270.10(h) and 270.30(b))

3. Permit Expiration and Continuation. Pursuant to 40 CFR §270.50, this permit shall be effective for a fixed term not to exceed ten years. Pursuant to 40 CFR §270.51, this permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 40 CFR §§270.14 - 270.29 and §270.10) and through no fault of the Permittee, the Regional Administrator has not issued a new permit as set forth in 40 CFR §124.15.
4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action to argue that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR §270.30(c))
5. Duty to Mitigate. In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. (40 CFR §270.30(d))
6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems to maintain compliance with the conditions of the permit. (40 CFR §270.30(e))
7. Duty to Provide Information. The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit. (40 CFR §§270.30(h) and 264.74(a))
8. Inspection and Entry. Pursuant to 40 CFR §270.30(i), the Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 - a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

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- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

9. Monitoring and Records. (40 CFR §270.30(j))

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Regional Administrator. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846, July 1982; 2nd ed.), Standard Methods of Waste Water Analysis (15th ed.; 1980) or an equivalent method as specified in the attached waste analysis plan.
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by §264.73(b)(9) (applicable to on-site generators only), and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
- c. Records of monitoring information shall specify:
 - (1) The dates, exact place, and times of sampling or measurements;
 - (2) The individuals who performed the sampling or measurements;
 - (3) The dates analyses were performed;
 - (4) The individuals who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.

10. Reporting Planned Changes and Anticipated Noncompliance. The Permittee shall give notice to the Pennsylvania Department of Environmental Resources and the Regional Administrator, as soon as possible, of any planned physical alterations or additions to the permitted facility. This notice must include a description of all incidents of noncompliance reasonably expected to result from the proposed changes. (40 CFR §270.30(1)(1) and (2))
11. Transfer of Permits. In accordance with 40 CFR §270.30(1)(3), this permit is not transferable to any person, except after notice to the Director. The Director may require modification or revocation and reissuance of the permit pursuant to 40 CFR §270.40. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270.
12. Twenty-four Hour Reporting. Pursuant to 40 CFR §270.30(a)(6), the Permittee shall report to the Pennsylvania Department of Environmental Resources and the Regional Administrator any noncompliance which may endanger health or the environment. Information shall be provided orally as soon as practicable but no later than twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:
 - a. Information concerning release of any hazardous waste that may endanger public drinking water supply sources.
 - b. Any information of a release or discharge of hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health. The description of the occurrence and its cause shall include:
 - (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident;
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and
 - (7) Estimated quantity and disposition of recovered material that resulted from the incident. A written submission shall also be provided to the Pennsylvania Department of Environmental Resources and the Regional Administrator within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause;

the periods of noncompliance (including exact dates and times) if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Permittee need not comply with the five (5) day written notice requirement if the Pennsylvania Department of Environmental Resources and the Regional Administrator waives that requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

- 12.1 Immediate Reporting of Releases. In accordance with the requirements of 40 CFR §264.56(d)(1) and (2), if the facility's emergency coordinator determines that there has been a release, fire or explosion which could threaten human health, or the environment, outside the facility, he must immediately notify local authorities if an evacuation of local residents is advisable, and he must immediately notify the government on-scene coordinator or the National Response Center.
13. Other Noncompliance. The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall contain the information listed in permit condition I.H.12. (40 CFR §270.30(1)(10))
14. Other Information. Whenever the Permittee becomes aware that he or she failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Pennsylvania Department of Environmental Resources and the Regional Administrator, the Permittee shall promptly submit such facts or information to the Pennsylvania Department of Environmental Resources and the Regional Administrator. (40 CFR §270.30(1)(11))